

The Board of Economic Inquiry, Punjab.

PUNJAB VILLAGE SURVEYS.—3.

AN ECONOMIC SURVEY

OF

TEHONG,

A VILLAGE IN THE JULLUNDUR DISTRICT

OF THE

PUNJAB.

INQUIRY

CONDUCTED BY

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UNDER THE SUPERVISION OF

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[The Board of Economic Inquiry, Punjab, does not hold itself responsible for
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PREFACE.

This is the third of the series of village surveys which the Board of Economic Inquiry is conducting ; it is hoped in time to publish the results of investigations into the economic conditions of at least one village in each of the twenty-nine districts in the province.

The Jullundur District has long been famous for its fertility ; it used to be known as the ' garden of the Punjab ' and offers a striking contrast to the newly colonised districts of the south-west and to other submontane districts in the north-west.

To the north, the district of Kangra contains the typical features of the sub-Himalaya, a tangle of hills and torrents, forests and scrub-jungle ; between Kangra and Jullundur lies the district of Hoshiarpur which receives the brunt of the torrents flowing down the Savalik hills. By the time they reach Jullundur, these have mostly spent their force and do comparatively little damage ; the hills have ceased and the land presents the level appearance with almost imperceptibly gentle slopes characteristic of the Indo-Gangetic plain. But Jullunder is still sufficiently close to the Himalayas to secure, in ordinary years, a generous monsoon rainfall of about 18 inches ; in addition, it has a winter rainfall of between 4 and 5 inches. Although the district lies between the rivers, Sutlej and Beas, it receives no irrigation from canals. It is, however, the best example the province affords of a district irrigated from wells.

In the village investigated, out of 2,161 cultivated acres no less than 860 receive irrigation from 99 wells. The population is heavy, the density per cultivated acre is high and the standard of cultivation is unusually good for the province. The average cultivated area per owner is only 2·94 acres, and even these small holdings used to be heavily fragmented, the 734 owners having *chahi* land scattered in no less than 12,499 fields. Of these, many were too narrow to ploughed crossways, being 100 to 150 yards long and only 3 to 5 yards broad.

Consolidation of holdings began in 1923, under the stimulus of the Co-operative Department, and in little more than a year one sub-division or *patti* had been completed. In this *patti*, the land of 207 owners was found to be scattered in 873 different places or parcels, and it was readjusted into 194 parcels, the lands of near

relatives being brought together ; the average size of a block increased from 0.29 to about 1 acre. In the consolidated area three new wells commanding 27 acres of land were sunk, and 6 acres more, which were dependent on rainfall, were brought under well-cultivation by allotment of the areas near existing wells.

The material advantages which have accrued from consolidation are satisfactory. One man who could hardly rent out his plots at Rs. 13/- per acre, after consolidating his holdings into one block of 13 acres, was able to sink a well on it and now gets Rs. 42/- per acre. In another case the income has risen from Rs. 13/- per acre to Rs. 26/- to Rs. 32/- after consolidation. The general estimate is that the yield per acre on consolidated land has doubled. Disputes of boundary encroachment, which are a source of great trouble in other areas, have disappeared from the consolidated area. Supervision is made easy and cost of cultivation has appreciably decreased. New paths provide access to all the consolidated blocks. The lesson learnt from this *patti* has been taken to heart by owners of other *pattis*, and it is hoped that before long the whole village will be covered by consolidation.

The people of Jullundur are famous for their enterprise, their willingness to seek adventure and livelihood abroad and their skill and industry ; of the village owners, a number have found means of livelihood elsewhere and their earnings remitted home enable a standard of living to be maintained which would be impossible if the petty holdings were the sole source of income.

It would, of course, be a mistake to claim that Tehong is ' typical ' of a Jullundur village, but it may be claimed with good reason that its general features are common to many other villages in Jullundur, that it represents with fair accuracy the conditions prevailing in a large portion of the district and that the facts hereafter detailed would be found repeated with only slight variations in many other villages in the tract between the Beas and Sutlej.

The investigator, Chaudhri Anchal Das, is a graduate of the Punjab University, who conducted the inquiry under my personal supervision. The result in the rough was ready some years ago, but it was kept waiting the final revision by Prof. Myles, the general editor of this series. Unfortunately, serious and prolonged illness prevented him from completing the task for a considerable period, and the Board will, in future, be deprived of the interest he took and the great industry he displayed in its work.

It is no part of the object of the Board of Economic Inquiry to draw deductions from the information collected ; it seeks to

collect as accurate data as possible and to present them in an orderly manner. It may be held by some that the information printed in the following pages is too detailed ; to this the reply is that the information here set forth is really the answer to the question : How do people live on the small holdings in a congested district like Jullundur ?

H. CALVERT.

May 7, 1931.

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CHAPTER I.

GENERAL.

1. The village of Tehong is said to derive its name from its foundation on the ruins of an older site or *teh*.† It is situated in the Jullundur District of the Punjab in the *tahsil* of Phillour, with which town it is connected by an unmetalled road four miles long. In this thickly populated tract villages are close together, and there are no less than eleven within two miles of Tehong. I. 1.*

The village is lacking in methods of sanitation ; the houses are close together, the streets are narrow, and manure is stacked within the inhabited area. The buildings are situated on the border line of the *Bet* or Sutlej riverain, and the *Dhoka* or upland ; to the south is a large swamp, which in the cold season attracts many waterfowl, and in consequence also a number of sportsmen. In the monsoon months this swamp is swollen by the spill from the Sutlej and by storm water from the uplands, which finds its way by two well-defined beds through the village lands. The flood water brings down sand on to the fields, and as it retreats the moist soil is prepared for wheat. The flow from the upland contains much valuable manurial matter washed from other villages, with the result that the soil is annually enriched as well as moistened.

Of the whole estate about one-fourth is in the *Bet* or riverain, and the rest on the upland. The total area is 2,475 acres, of which 137, the village site, cemeteries, cremation ground and paths are uncultivable ; 177 acres are *banyar* or uncultivated but culturable waste, and the remaining 2,161 acres are cultivated. This cultivable area was divided into no less than 13,195 separate fragments, an unusual number even for such an excessively fragmented district. The task of readjustment by means of a co-operative society for the consolidation of holdings is being undertaken, and already the number of separate fragments has been reduced to 12,091.

* The figures in the margin refer to corresponding numbers in the Questionnaire used by the Investigator and reproduced at the end of the book as Appendix B.

† For the explanation of the vernacular words used in this Report the reader is referred to the Glossary in Appendix C.

2. The population of the village at each census from 1850 to 1921 is given below :—

TABLE I.—*Population of Tehong in Different Years.*

Census year.	Agriculturists.	Non-agriculturists.	Total population.
1850 . .	966	889	1,855
1855 .. .	not shown	not shown	2,036
1868 . .	„	„	2,531
1881 .. .	1,875	853	2,728
1892-93 .	2,120	900	3,020
1901 .. .	not shown	not shown	2,802
1911 . .	„	„	2,292
1921 .. .	„	„	2,303

In the census of 1881 and those which have taken place since, information was collected as to the main tribes. This information for 1881 is given in Table II.

TABLE II.—*Classification of Population of Tehong in the Census of 1881.*

Caste or Tribe	Dependent entirely on agriculture.	Living partly by agriculture and partly by other means.	Unconnected with agriculture	Total.
Arains . .	1,709	..	10	1,719
Rajputs ..	66	..	16	82
Jats . .	53	4	.	57
Banias ..	..	33	2	35
Gujars . .	6	..	10	16
Miscellaneous..	..	4	356	360
Kamuns ..	..	..	459	459
<i>Total</i> ..	<i>1,834</i>	<i>41</i>	<i>853</i>	<i>2,728</i>

Table III. gives the classification adopted in the 1892-93 census, and I. 2
Table IV. that adopted in the last three censuses.

TABLE III.—*Classification adopted in the Census of 1892-93.*

Year	ARAINS		JATS		OTHERS.		Grand Total
	Agricul- turists.	Non-agri- culturists.	Agricul- turists.	Non-agri- culturists	Agricul- turists.	Non-agri- culturists	
1892-93	1,983		62		75	900	3,020

TABLE IV.—*Classification adopted in the last three Censuses.*

Year	HINDUS		MOHAM- MEDANS.		SIKHS		CHRISTIANS.		TOTAL		Grand Total.
	Men	Wo- men.	Men	Wo- men.	Men	Wo- men	Men	Wo- men.	Men .	Wo- men.	
1901	232	213	1,147	1,118	56	36		.	1,435	1,367	2,802
1911	208	192	994	808	53	37		.	1,255	1,037	2,292
1921	201	181	950	859	48	58	2	4	1,201	1,102	2,303

The following figures have been taken from the Civil Surgeon's re-
cords, and indicate the mortality in years when serious epidemics were
raging : —

In 1896, 153 persons — 81 men and 72 women — died of plague.

In the year 1903-04, 400 persons died of plague — 127 men and 273
women. In 1909, plague was again raging and there occurred 47 deaths —
21 men and 26 women. In this year the *tahsildar* remarked upon the
emigration of *Arains* to the Canal Colony Districts of Lyallpur and
Montgomery to cultivate as tenants.

In 1914, cholera raged, owing to which 93 deaths took place ; of
these 49 were men and 44 women. Again in 1918, 165 persons died of
influenza ; of the victims 88 were men and 77 women.

3. Of the 4 registers kept under official auspices for the record of I. 3
marriages and betrothals, three have been lost by the persons in charge :
the only one which could be examined is not made use of regularly.
Several marriages that have taken place during the period of this investi-
gation are not included in the entries.

The register in use records only 25 alliances between 7th June
1922 and 14th March 1926 ; of these 4 cases are of betrothals, and 3 of *nikah*
sani or *karewa* (re-marriage of widows).

I. 3.

Of these 25 alliances, 2 are of *Chamars*, 15 of *Arains*, 6 of *Mochis* and 2 of *Julahas*. The age of the boy or girl is not always given ; if it is below 18 years, only the word *nabalig* (minor) is written. Consequently the age of marriage for boys and girls of different communities is given after personal inquiry.

TABEL V.—*Statement showing Age of Marriage for Boys and Girls in the various Communities in Tehong.*

Community	AGE BETWEEN WHICH MARRIAGE IS CONTRACTED	
	Boys.	Girls
Sunars (goldsmiths) .. .	12 to 15	10 to 12
Khatris (traders) . . .	16 „ 18	12 „ 15
Brahmans ..		
Banias (shopkeepers) .		
Sikh Jats .	16 „ 18	12 „ 15
Mohammedan Gujars (cattle dealers)	12 „ 16	12 „ 15
Mochis (shoemakers) .. .	12 „ 14	8 „ 10
Julahas (weavers)		
Darzis (tailors) .. .	12 „ 14	10 „ 12
Kassabs (butchers)	16 „ 20	18 „ 22
Khojas		
Sayeds	15 „ 18	14 „ 16
Mohammedan Rajputs .	18 „ 25	15 „ 20
Jhiwars (water-carriers) . . .	12 „ 14	10 „ 12
Telis (oil-pressers) .. .		
Mirasis (jester and drummer) .		
Faqirs (beggars) .. .	12 „ 15	10 „ 12
Hajjams (barbers) .. .		
Ghumars (potters) .. .	12 „ 15	10 „ 12
Lohars (blacksmiths) . . .	16 „ 20	12 „ 14
Tarkhans (carpenters) .. .		
Chamars (leather workers) ..	3 „ 6	3 „ 6
Bhangis (sweepers)	14 „ 16	10 „ 12
Arains	12 „ 15	5 „ 10

4. In the following statement are shown the number of families and persons and the size of the average family in each of the communities in the year 1925, when a census of the village was taken by the investigator:—

TABLE VI.—*Communities of Tehong with Families and Persons.*

Community.	Families	Persons	Average size of Family
Sunars . .	7	68	9.7
Khatris ..	2	7	3.5
Brahmans . .	4	26	6.5
Gujars .. .	1	3	3.0
Mochis ..	23	95	4.1
Julahas ..			
Chhimba (darzis)	1	5	5.0
Kassabs .	1	6	6.0
Khojas . .	1	1	1.0
Sayeds . ..	4	19	4.7
Mohammedan Rajputs ..	4	17	4.2
Ghumars .. .	4	21	5.2
Jhiwars	12	50	4.1
Faqirs .. .	8	43	5.4
Telis	8	40	5.0
Mirasis	4	20	5.0
Hajjams .. .	8	36	4.5
Lohars	13	102	7.8
Tarkhans			
Chamars	25	129	5.2
Bhangis	4	18	4.5
Banias	17	112	6.6
Sikh Jats	14	56	4.0
Araims	345	1,854	5.3
<i>Total</i> ..	<i>510</i>	<i>2,738</i>	<i>5.3</i>

I.5.(1). (1). (a). (i). There are 207 families (1,218 persons) wholly dependent on agriculture for their livelihood ; of these, 114 persons remain for the greater part of the year outside the village. They cultivate in the Canal Colony districts and usually spend less than three months of each year in the village.

(ii). Besides the above, there are 145 families (739 persons) partly dependent on agriculture ; of these, 78 persons spend less than three months in the year in the village as they usually work as labourers in the Railway Construction Department and in the Canal Colonies.

(b). (i-iii). Rent receivers, *i.e.*, non-cultivating owners number 190 families (836 persons) Actual cultivating owners' families are 170 (1,069 persons), and those who own no land and are simply tenants or rent payers comprise 4 families (27 persons).

(iv). Excluding *lohars* (blacksmiths) and *tarkhans* (carpenters) there are 27 families (132 persons) dependent on agricultural labour, *viz.*, 25 families (129 persons) of *chamars* (leather-workers), one family (2 persons) of *Arwains*, and one man a *hajjam* (barber).

I.5.(2). (2). Those engaged in cottage industries are weavers and potters, in all 21 families (95 persons). Weaving is done by 6 families (27 persons) of *mochis* (shoemakers) and 12 families (50 persons) of *julahas* or *bafindas*. Potters, *ghumars* by caste, are 3 families (18 persons).

I.5.(3). (3). 21 families (109 persons) live on charity, begging, religion, etc. 8 families (43 persons) are *faqirs* by caste ; of these, one family (10 persons) is cultivating as tenant in addition to begging. 4 families (20 persons) are *mirasis*, of whom 2 families (7 persons) also earn money as menders of utensils. 4 families (19 persons) are *Sayeds*, two persons of whom work as tailors. 4 families (26 persons) are Brahmans, who also depend on shopkeeping and trade, 2 families act as money-lenders also. One is a *jhiwar*, the only man of his family, old and blind, who lives on the charity of others and does not follow any profession whatever.

I.5.(4). (4). Among the artisans of the village there are 13 families (102 persons) of *lohars* and *tarkhans*, all of whom also depend on *sepi* (definite work done for a cultivator on customary payment). 20 of these persons live outside the village for more than nine months in the year and supplement their income by service and skilled labour in cities.

Besides the above, there are 2 *Arain* families (27 persons) who work as carpenters and also depend on agriculture; they work on *sepi* also. *Sunars*, 7 families (68 persons), work as goldsmiths; of these, 2 families (13 persons) are non-residents of the village and usually come and live in it only occasionally. They are Hindus by religion. I 5.(4).

Three families (15 persons) are working as tailors besides the 2 *Sayeds* previously mentioned; of these, 2 families (10 persons) are *jhiwars* by caste and also work as water-carriers. The remaining family (5 persons) is *chhimba* by caste and work also as dyers, in addition 2 *chhimbas* who work as tailors here belong to a neighbouring village; they follow their trade in Tehong during the day and return home at night.

One man, *julaha* by caste, works as a dyer in addition to weaving. He is also a casual labourer.

Three families (16 persons) work as masons. One family of these (5 persons) is *jhiwar* by caste, and also lends money in addition to carrying water. The other 2 families are *Arains*, and they depend partly on agriculture.

(5). *Chamars* work as field labourers during the busy seasons. All the 25 families (129 persons) work on *sepi*. The village being largely populated by *Arains*, whose womenfolk work in the fields, there is little need for the permanent services of field labourers. The *chamars* also depend partly on casual labour other than in the field, i. e., on tanning and shoemaking. In addition there are 2 families (3 persons)—one *Arain* and the other *hajjam*—which depend partly on field labour; the *Arain* is also a small owner and rent receiver. I 5.(5)

(6). There are 27 families (185 persons) whose principal means of livelihood is agriculture, but who supplement their income by engaging in other occupations, such as carting for hire, casual labour, keeping a grinding mill, service, carpentry, etc. I 5.(6).

(7). 136 families (654 persons) follow agriculture as a subsidiary calling and depend mainly on other occupations such as service, casual labour and trade. I 5.(7).

(8). (9). There are 37 persons who live outside the village for a large part of the year. Of these, 1 is a police constable, 12 are in the civil service, 2 are serving in firms, 3 are carpenters in Government service, 17 I 5. (8) (9).

I. 5. (8),(9). are serving as labourers in the Railway Construction Department, and 2 are in foreign lands. Besides the above one person is a pleader, 2 are pensioners, and 104 are menial servants in towns like Phillour and Ludhiana; of the menials, 82 live less than three months in the year in the village.

I. 5. (10). (10). There are 17 non-agriculturist money-lenders in 15 families (99 persons); of these, 2 families (7 persons) are *jhiwars* who work as water-carriers, one family (5 persons) working also as masons. One family (10 persons) is *tarkhan* (carpenter) and has income from service. Two families (21 persons) are *sunars* working as goldsmiths. The remaining 10 families (61 persons) have income from shopkeeping and trade as well as from service. Of these, 7 families (44 persons) own land which they lease out and thus receive a certain amount in the form of rent.

There are 12 agriculturist money-lenders in 11 families (53 persons). Of these, 5 families (32 persons) cultivate land, 4 families (16 persons) are rent receivers, 1 family (4 persons) has income from service and casual labour. One family (a single man) is in service; this man is also a trader and rent receiver.

In addition to these money-lending families, there are 10 families (57 persons) who have income from shopkeeping; of these, 3 families (11 persons) also engage in other trade.

In the last ten years, no income-tax has been paid by any of the residents of the village.

I. 6. 6. Generally a cultivator does no productive work in hours not devoted to the cultivation of land. In his leisure hours he visits friends and spends the time in gossiping, smoking a *hukka*, playing cards, etc. When rains bring relief from the working of the well, he often visits relatives at a distance.

I. 7. 7. Abnormal agricultural conditions do not seem to induce a cultivator to follow any subsidiary industry. He simply 'waits for a better future.' At present only 15 cultivating families ply *gaddas* (carts) for hire occasionally; one such family, *Arain* by caste, is working as a *tarkhan* (carpenter) on *sepi* contract, and another keeps a grinding mill worked by cattle power.

8. An account is given below of the payments made to artisans and menials. 18.

The *Lohar* (blacksmith) is paid $\frac{1}{2}$ a seer per maund of 40 seers, * i.e., $1\frac{1}{4}$ per cent. of the produce of wheat and maize. Of the cotton crop he is allowed one of the last two pickings, the other being allowed to the *tarkhan*; the amount so received averages half a seer per *kanal*† of the crop. One bundle of about $1\frac{1}{4}$ maunds of the season's fodder crop is given to him twice a year; he gets a bundle at each harvest time in return for sharpening sickles in the field. He takes four sticks of sugarcane on each visit to the cane-pressing yard. At the time of sowing of wheat and maize, the principal food grain crops, he is given 2 seers of the grain for each plough‡. At a marriage his reward may be Rs 3/- or so, besides a *parosa* (food for two persons generally) and one seer of *gur* as *bhaji*. On religious occasions, too, he is given *parosas*. The *Arains* never give more than 4 annas on a marriage. *Lohars* here are Hindus, so *parosas* are not given to them; no other payment is made instead to make up the deficit. At the time of sinking a well, when the *chakla chob* or *gand* (circular wooden frame over which the brick lining is built up) is let down, generally Rs. 2/- and $\frac{1}{4}$ seer of *gur* are given to the *lohar*. He gets 4 to 5 seers of cane juice once in the season.

The dues of a *Tarkhan* (carpenter) are similar to those of the *lohar*, less the payment of grain at sowing time. At a *chakla chob* ceremony, he gets some Rs. 30/-, one or two upper cloths worth at least Rs. 2/- each, plus $\frac{1}{2}$ a seer of *gur*. Rs. 25/- out of the amount mentioned above is considered as his wages for the preparation of the *gand*. An *Arain* marriage ceremony brings him 4 to 8 annas as gift. He charges 8 seers of food grains for making a *bhoni* (pulley), 4 seers for making a wooden mortar, and 2 seers for a plough, the rest of the work of making ordinary implements he does as a part of his contract. He gets canes and cane juice just like the *lohar*.

* 1 maund=40 seers=82 $\frac{1}{2}$ lbs

† In Jullundur District 20 *marlas*=1 *kanal*, and 10 *kanals*+12 *marlas*=1 acre

‡ A cultivator keeping a pair of draught animals is said to be doing cultivation with one plough.

I. 8.

The *Ghumar* or potter, gets one rupee on the marriage of a Sikh *Jat*, plus a *parosa* if some two or three earthen pots are taken from him. He is given one bundle of a fodder crop twice a year and two seers of food grains at each harvest. At an *Arain* marriage he receives from Re. 1/- to Rs. 2/-, as he supplies earthen dishes for the guests.

The dues of the *T'eli* (oil-presser) are Rs. 2/- on the marriage of a Sikh *Jat* cultivator. He gets 8 seers of food grains twice a year, and an *Arain* marriage brings him Rs. 1/4/0 as his dues.

The dues of a *Mirasi* (jester and drummer) amount to Rs. 10/- on a *Jat's* marriage, and he is given food for the days of the ceremony, and at least Re. 1/- on the birth of each male child in the family as *badhai*, failing which he will never recite his name as a member of the family tree on marriage occasions. At harvest times, he gets 8 seers of grain twice a year, and an *Arain* marriage brings him dues varying from Re. 1/- to Rs. 2/- along with a *parosa*. He is also given a bundle of fodder twice a year. The *Mirasi* woman is often sent for by women to comb and dress their hair and she is given each time about $\frac{1}{2}$ a seer of grain.

The dues of a *Hajjam* (barber) vary from Rs. 10/- to Rs. 20/- on a marriage whether of an *Arain* or a Sikh *Jat* cultivator. He is given *parosa* daily on the marriage days, and a bundle of fodder twice a year. A *gand* or *chakla chob* ceremony brings him Rs. 2/-. On the birth of a first male child he receives at least Re. 1/-, and in one case on the birth of a son a *hajjam* was given a cow-buffalo worth Rs. 125/- by an *Arain* in service.

A *Jhiwar* (water-carrier) is given ten seers of grain twice a year as his dues for supplying one *ghara* (earthenware pitcher) of water once a day. In addition, as a menial, he receives two or three seers of grain twice a year along with a bundle of fodder from all cultivators for whom he works. On the occasion of a Sikh *Jat's* marriage his dues amount to Rs. 7/-, while on a marriage of an *Arain* they vary from Rs. 8/- to Rs. 10/- if the marriage is of a girl, and from Rs. 4/- to Rs. 5/- if of a boy. At a *chakla chob* ceremony he gets Re. 1/- along with a $\frac{1}{4}$ seer of *gur*.

The *Panda* (priest) receives Rs. 5/- to Rs. 10/- in the case of a *Jat's* marriage. On each *shangrand* (the first day of the Indian month), he is given $\frac{1}{2}$ a seer of grain. During marriage days he gets free food.

The *Qazi* acts as a priest among the *Arains* and is given Rs 1/4/0 on I. 8 a *nikah* (marriage). He receives in charity from 4 to 8 annas even on the marriage of a Hindu, if the guardian of the bride or bridegroom can afford to offer this in the name of the mosque. It is worth noting that Hindus on marriages generally show respect to mosques and *takras* as well as to their own temples and *dharamshalas*. At the 'Id festivals the congregation offer from 2 to 4 pice each for the *Qazi* leading the service and this collection may total Rs. 15/- to Rs. 20/-. At the *Bakr* 'Id festival the hides of the sacrificial animals (usually kids) belong to him ; he is also given one seer of meat from each kid sacrificed.

The *Parohit* among the Sikhs and Hindus and the *Sayed* among the Muslims serve as religious leaders or priests. The *Parohit* of this village belongs to the Amritsar District and partly owing to his inability to come on ceremonial occasions, and partly owing to changes in Sikh sentiments, he is now in danger of being ignored. His dues are set aside nominally, but they never reach him ; otherwise his share on such occasions would be the greatest. On a marriage or a religious occasion a *Sayed* or *Pir* is offered Re. 1/- and shares in the feast.

A family of average size pays a *Dhobi* (washerman) 16 seers of grain twice a year as his wages. Sikh *Jats* offer him Re. 1/- on a marriage along with 1½ seers of *gur* and a *parosa*, while *Arains* give him Rs. 2/- to Rs. 3/- on the marriage of a boy, and Re. 1/4/0 of a girl. At present there is no *dhobi* belonging to the village. The work is done by men from Phillour, and there is a tendency to pay them cash wages.

A *Bhangi* (sweeper) is paid by a family of average size 6 seers of grain twice a year as wages along with one *chapatti* with *dal* every day. On a marriage, Sikh *Jats* pay him about Rs. 3/- as his dues ; *Jooth*, (the leavings of the guests' food, including sweets), is his by right ; he also gets *parosa*. *Arains* on a similar occasion pay him 8 annas. The dead bodies of cattle which die before they are weaned are his by custom.

The *Bharai* (drummer) who serves the Muslims only does not belong to the village. He gets ½ of a bundle of wheat and maize at harvest times, and Re. 1/- whenever a cultivator goes to pay his homage to the *Sakhisarwar* Shrine at *Nigha* in the Multan District. Whenever a wrestling match is arranged in the village one-fourth of the receipts in *gur* or cash is given to him.

I. 8

The *Bazigar* (juggler and acrobat) is a nomad. Once in about six years a display is arranged, and then the cultivators pay him one seer of grain per family.

The *Faqir* (beggar) and *Majawar* (cemetery caretaker) are menials who serve only Muslims. The former gets Rs. 2/- on a boy's marriage and Rs. 2/8/0 to Rs. 3/- on a girl's. On the death of a person he gets the clothes of the deceased, including a pair of shoes along with grain varying from 4 to 8 seers. The latter gets 8 annas at a marriage, and 2 seers of grain twice a year at harvest times. Every Thursday he begs $\frac{1}{3}$ th of a seer of grain from each Muslim house; some also give mustard oil at the rate of $\frac{1}{32}$ seer (1 oz.) per house. He also gets $\frac{1}{4}$ bundle of wheat and maize per cultivator at harvest times.

The *Rakha* who watches the crops is paid by the cultivators jointly. His dues are 12 seers of grain per *pakka hal* (25 to 30 acres of cultivated land).

Besides what has been enumerated above, all *kamins* get clothes: they pick up from the landowners a garment here and there. They enjoy free the customary rights of cutting grass and grazing on the owners' common, as well as on the land after the harvest has been cut; of using water from ponds and wells, and of sites on which to stack manure and to tie cattle. Their house sites too, in a large majority of cases they have obtained free. They collect fuel, and have dung and clay from off the land or village *shamilat* for any purpose without any payment.

The *kamins* also enjoy numerous privileges in the village which are difficult to assess, but which must be counted in their real income. For instance, if a *kamin* happens to visit a cane-pressing yard, he is ordinarily given a drink of juice and also four canes.

Kamins keep goats and *bhangis* and *ghumars* keep donkeys, and for these animals they enjoy freely the privileges of browsing and grazing although the owners may at any time restrict them, but this has seldom or never been done. *Kamins* have also the customary right of gleaning the fields, which is generally done by women and children after the harvest is cut. *Jhiwars* and others sometimes accumulate big heaps of the harvest by supplying water in the fields at harvest time. The case of one *jhiwar*

is worthy of mention. He worked as a supplier of water in the fields 1. 8 when the last *rabi* harvest was being cut; there were three members of his family to assist him for about two weeks, and the harvest he collected yielded him 20 maunds of wheat which he kept for household consumption, and straw which he sold for Rs. 22/-. All *kamins* collect small gifts in this way and accumulate at least 2 maunds of grain. For crushing or threshing their share, they get the use of the owners' oxen free of charge.

There are 5 grain-roasting hearths, owned by 5 different families of *jhwars*; these hearths provide another means of supplementing their incomes. In the evening people get their grain roasted on the payment of one *chhatank* per $\frac{1}{2}$ seer of grain roasted, i.e., $\frac{1}{8}$ th of the grain. The fuel consumed in this operation is picked up free of cost.

Ghumars burn their mud pots with dung collected from the owners' land; clay for the pots, as has already been noted, is obtained free of cost.

Bhangis (sweepers) collect manure by stealth from off the owners' sheds and sell it for cash. B., a sweeper, every year in this way makes Rs. 10/- to Rs. 14/-. The owners are aware of the practice but they take no notice.

If a *kamin* does not enjoy any of the customary rights described above, it is due to his personal taste, higher standard of prosperity or self-respect.

Agricultural Labour

9 A *chamar* or leather-worker is also a field labourer. He is paid one 1. 9 seer per maund (i. e., $2\frac{1}{2}$ per cent.) of the produce of the principal food crops, wheat and maize, and one seer per maund in addition for personal service and for mending leather things such as shoes and irrigation bags. On social and religious occasions he is given *parosa*. On a *Jat's* marriage he gets about Rs. 4/-, while on a similar occasion of an *Arain* cultivator he gets Rs. 1/8/0. He also gets a bundle of fodder twice a year. Dead animals are taken by him, except those not weaned which go to the sweeper.

In the village the *Arain* cultivators form the large majority and the employment of field labour by them is only occasional or seasonal. Ordinarily a cultivator takes 7 to 10 days labour in a year from a *chamar* for weeding, reaping and winnowing. As a reaper, the latter receives each day the heaviest bundle of the harvested crop, together with a *kalawa* ($\frac{1}{3}$ bundle) as *bhatta*; the bundle and *kalawa* together are sufficient to yield 12 to 16 seers of grain, besides straw or fodder. His

1 9. wife, female relatives and children have the prior right to glean the fields. Winnowing on the whole takes about two days and the grain he gets varies from $\frac{1}{2}$ to 1 maund. For weeding, he receives a share of the crop weeded at harvest time apart from his other dues ; for instance if he weeds cane or cotton from 2 to 4 days he will receive *gur* or cotton worth Re. 1/- to Rs. 2/-. A *chamar* is not expected to remain and await his owner's requirements except in certain seasons, *e.g.*, during weeding, reaping and winnowing. *Chamars* here work in leather and trade in it, making shoes, etc., for sale ; do casual labour at Phillour and other places, and mould clay into bricks. Cultivators who demand the services of a *chamar* for about three months in a year pay differently. They give 2 seers per maund (5 per cent.) of all proceeds, cotton, *gur*, pulses, etc. ; if he is wanted to fetch fodder for the cattle and he works for about 3 hours, he is usually given one bundle weighing 1 to $1\frac{1}{2}$ maunds.

If the *chamar* is desired to work as a *jhoka* to boil the cane juice into *gur*, he gets daily *dhandoe* (wash of the pan) and *mail* (impurities skimmed off) for his own consumption in addition to his main dues, along with a daily drink of the juice and canes varying from 4 to 8, plus 1 to 2 *tangars* (1 to $1\frac{1}{4}$ maunds) of *trash* and *megas* (canes after the juice has been extracted), weighing on the whole 2 to 3 maunds. He eats at the expense of the owner in these days.

As regards privileges, he enjoys all those which have been mentioned in the case of *kamins*. In the village, 25 *chamar* families keep 16 cow-buffaloes and 3 cows besides young stock, and they all feed them at the expense of cultivators. It is interesting to note that the cattle kept by *chamars* are as a rule strong and healthy, as they are fed on good fodder. '*Chamar da pasu chamar hi rakhan tan rakhan, hor kor nahin rakh sakda,*' runs the Punjabi saying, which means that only a *chamar* is in a position to keep a *chamar's* cow. The revenue records, *jamabandi* and *khasra qirdawari*, show that the *chamars* have never cultivated an inch of ground to grow any fodder crop whatever ; they neither grow nor purchase it. They keep cattle with a view to selling at a profit ; purchase them cheap when on the verge of getting dry, and feed them on green grass taken from the cultivators' lands until the time of the next lactation, when they are able to sell at a higher price.

Any dispute over rights or payment is liable to end in a breach of the relationship between cultivators and *chamars* as the labourers feel their

power and exercise it in such a case by a strike and boycott against the cultivators until a satisfactory decision is secured. The *chamars* have distributed among themselves the work of the families of cultivators in such a way as to secure a fair apportionment of income among themselves. I 9.

Labour for agriculture is scarce in the village since the labourers prefer to work at Phillour and other neighbouring places in occupations other than agriculture ; woodcutters, transport workers, and in the District Board service. The disinclination for agricultural labour is probably due to its hard nature. "I could not get a labourer for weeding maize despite my offering 10 annas a day with food. The people go to Phillour and easily earn from 12 to 20 annas a day ; why should they burn their skin in the blazing sun ? " said M. B. Younger men of the *chamars* and *Arains* who depend on labour go to the Canal Colonies to earn wages as reapers, threshers and winnowers at the wheat harvest, particularly when they are hard pressed with debts and agricultural conditions here are not good.

CHAPTER II.

CROPPING AND CULTIVATION.

- II. 1. 1. According to the *Milan Raqba* statement in the Village Note Book, the area of the village consists of the following classes of land :—

TABLE VII.—*Showing Classification of Land in Tehong in the Year 1923-24.*

Total area in acres.	UNCULTIVATED AREA IN ACRES.			CULTIVATED AREA, IN ACRES.		
	Banjar Jadid *	Banjar Kadim.†	Unculti- vable area	Chahi ‡	Chahi master §	Barani ||
2,475	164	13	137	860	34	1,267

- II. 2. 2. The average cropping for the past five years (*i.e.*, 1919-1924) is shown in Table VIII. on the following page ; this has been extracted from the *Jinswar* sheets of the *Lal Kitab*. The figures showing the cropping in each of the five years, from which this average has been constructed, are reproduced as Appendix A. to this Chapter.

- II. 3. 3. An examination of the *Jinswar* statements shows that no great changes in cropping have occurred during the past twenty years. One change, however, may be noted. Formerly *Arain* cultivators, almost without exception, used to grow about an acre of vegetables, and these their womenfolk carried to neighbouring villages and traded them for grain. The practice was admittedly profitable, particularly in years of scarcity. Recently, however, the community by unanimous agreement has stopped

* *Banjar Jadid* = new fallow : land which has not been sown for four successive harvests is classed in the last of the series as *banjar jadid*.

† *Banjar Kadim* = old fallow : if *banjar jadid* remains uncultivated for the next four harvests, it will pass into the category of *kadim* or old fallow

‡ *Chahi* = irrigated from wells.

§ *Chahi master* = land watered from wells belonging to other people.

|| *Barani* = dependent on rainfall

TABLE VIII.—Statement showing Average Cropping in Tehong for the Five Years, Kharif 1919 to Rabi 1924.

	Crop	CHAHU		BARANI		Total Matured.	Total Kharaba.	Total Sown.	Percentage of Kharaba on Sown.	II. 3.
		Matured	Kharaba	Matured	Kharaba					
KHARIF.	1. Maize	247 4	7 0	0 2	2 8	247 6	9 8	257 4	3 8	
	2. Jowar	0 2	..	4 0	..	4 2	..	4 2	..	
	3. Mash	2 4	..	16 2	8 2	18 6	8 2	26 8	30 5	
	4. Til	0 2	..	0 8	..	1 0	..	1 0	..	
	5. Sugarcane	114 0	2 4	..	..	114 0	2 4	116 4	2 1	
	6. Cotton	30 6	1 0	1 0	1 4	31 6	2 4	34 0	7 1	
	7. San (hemp)	3 6	0 8	9 6	2 0	13 2	2 8	16 0	17 5	
	8. Vegetables	0 2	..	..	..	0 2	..	0 2	..	
	9. Vegetable fruits	0 2	..	4 0	0 8	4 2	0 8	5 0	14 0	
	10. Chillies	2 6	..	..	..	2 6	..	2 6	..	
	11. Chari fodder	30 8	0 2	412 8	105 6	443 6	105 8	549 4	19 2	
	12. Munji	0 2	..	..	..	0 2	..	0 2	..	
	13. Mung	..	..	0 4	..	0 4	..	0 4	..	
	Total	432 4	11 4	449 0	120 8	561 4	132 2	693 6	13 3	
RABI	1. Wheat	379 2	62 0	235 4	49 8	614 6	111 8	726 4	15 4	
	2. Barley	6 0	3 4	7 8	4 2	13 8	7 6	21 4	35 5	
	3. Gram	1 4	1 2	9 8	22 8	11 2	24 0	35 2	68 1	
	4. Gram and Wheat	46 4	4 0	251 0	47 4	297 4	51 4	348 8	14 8	
	5. Wheat and Barley	0 2	..	0 6	..	0 8	..	0 8	..	
	6. Oats	..	..	..	0 2	..	0 2	0 2	100 0	
	7. Alsı (linseed)	0 2	..	..	..	0 2	..	0 2	..	
	8. Sarson (mustard)	1 6	..	..	..	1 6	..	1 6	..	
	9. Vegetables	1 8	..	..	..	1 8	..	1 8	..	
	10. Carrots	2 6	..	..	..	2 6	..	2 6	..	
	11. Potatoes	0 4	..	..	..	0 4	..	0 4	..	
	12. Vegetable fruits	21 8	0 4	..	..	21 8	0 4	22 2	1 8	
	13. Poppy	..	0 2	..	..	..	0 2	0 2	100 0	
	14. Tobacco	6 8	..	..	..	6 8	..	6 8	..	
	15. Garlic and Onions	2 2	..	..	..	2 2	..	2 2	..	
	16. Fodder crop not included above	204 8	22 2	..	0 4	204 8	22 6	227 4	9 2	
	17. Massar	..	..	..	0 2	..	0 2	0 2	100 0	
	18. Taramira (oil seed)	..	..	..	0 6	..	0 6	0 6	100 0	
	19. Sonf (aniseed)	0 2	..	..	..	0 2	..	0 2	..	
	Total	675 6	93 4	504 6	125 6	799 2	219 0	1018 2	15 5	

BOTH HARVESTS : Average for 5 years, Kharif 1919 to Rabi 1924.

Total cropped area	..	..	..	..	2,061.6 acres.
Total kharaba	..	..	..	..	351.2 "
Total sown	..	..	..	..	2,412.8 "
Percentage of kharaba on sown area	..	..	..	..	14.5 per cent
Percentage of cropped on cultivated area..	..	..	..	..	85 4 "
Average cultivated area of the village	..	..	..	..	2,138.8 acres.

II 3. this practice, and the growing of vegetables on the old scale has ceased. It is now considered a mark of degradation to allow the womenfolk to go out to sell vegetables.

II 4 4. The cropping during the last eight harvests on 25 *barani* fields and 25 *chahi* fields has been examined in detail to ascertain the most common rotation of crops. The detailed statements are given in Appendix B. to this Chapter, and here only the main points need be noted.

After a wheat crop on *barani* land, the fields are almost invariably allowed to remain fallow during the following *kharif*, and are sown with wheat again for the next *rabi*. In the case of *chahi* lands also, the fields are commonly left fallow after wheat. Sometimes, however, a *chari* crop is grown, instead of allowing them to lie fallow if wheat is to be sown in the next *rabi*, though this is only done in the case of strong, manured *chahi* land. *Barani* lands sown with *chari* after wheat are usually left fallow in the next *rabi*. Sometimes, however, gram is sown immediately after *chari* followed by fallow in *kharif*.

On *chahi* land the most common rotation is maize in the *kharif*, a *senji metha* fodder crop in the *rabi*, sugarcane in the next *kharif*, fallow in the *rabi*, and then maize again or cotton in the next *kharif*. When a field is to be used for maize again in this rotation, a catch crop of melons is sometimes grown. Sugarcane sometimes follows wheat if the latter is cut green for use as fodder.

II. 5. 5. The high prices of cotton and sugarcane do not appear to have led to any marked extension in their cultivation. The area under these two crops for the last six years is given below :—

TABLE IX.—*Showing Area under Cotton and Sugarcane in Tehong from 1919 to 1924.*

Year.		Sugarcane. Acres.		Cotton. Acres.
1919	..	124	..	39
1920	..	124	..	58
1921	..	100	..	15
1922	..	119	..	26
1923	..	115	..	32
1924	..	104	..	52

In 1920 the cotton crop was severely injured by disease, and as a result its cultivation was discouraged in the following year. The crop in 1921 was good, and the area under cotton has again risen until in 1924 it is almost as high as in 1920. The sugarcane acreage has shown no tendency to extend but rather to contract. The reasons given by the *zemindars* for the cultivation of these two crops not having been extended are :— II. 5.

(a). Owing to excessive fragmentation, land is not available in large plots, and the cultivator is more inclined to rest satisfied with cultivating a small area than to extend his labour to distant fields.

(b). They are not accustomed to cultivate large areas.

(c). The cotton crop has often been attacked by disease as the picking season approached and the cultivator is disheartened.

(d). Land for growing these crops is not available on cash rents, particularly in the *Bet* where a tenant, because of better irrigation facilities, prefers to grow them; *batai* rents for these crops are largely in vogue.

6. The manure used consists of dung and sweepings of all sorts, including fuel ashes, and is normally home produced. If specially needed, it is purchased from those who have no land on which to apply it, *e.g.*, *kamins*, either in exchange for fodder, or from 8 annas to Re. 1/- per cart-load, the price varying according to the available supply and the quantity of dung in the manure. Owners of land are responsible for the supply of manure to their tenants only when the land is rented on *batai*. There are complaints that sufficient manure is not available. The dung is largely used for fuel, and, also, when mixed with clay, for plastering and repairing houses. Chemical or artificial manures are hardly known and never used. II. 6.

When wheat is grown on *barani* land no manure is ordinarily applied; even *chahi* lands are seldom manured for this crop, except when it is succeeded either by a *chari* fodder, or by cotton with *senji* as a catch crop, to be followed in turn by sugarcane.

Maize when grown in any rotation requires the land to be manured. It is usually followed by *senji metha* which in turn is succeeded either by

- II. 6. maize again, or by cane and then melons, after which the land must be again manured for maize. Cotton and later on *senji* and then sugarcane, is another rotation after *senji metha*, with maize before it. It will be seen that the *zemindar* gets from two to five crops in quick succession from fields which have been manured.

The quantity of manure used varies from less than one to about six cart-loads per *kanal*, i.e., from about 10 to over 60 cart-loads per acre. Usually it is from 3 to 4 cart-loads per *kanal*, or about 30 to 40 cart-loads per acre, each load weighing from 12 to 14 maunds.

Generally, the whole of the manure is carted to the fields and placed in small heaps over the area to be manured : it is scattered and mixed with the soil just before sowing. While lying in heaps in the fields the manure is apt to lose much of its strength by the action of sun, wind and rain. It is carted to the fields in May and June, in the case of maize it stays there for about 1 or 1½ months, and in the case of wheat for about 5 months. Sometimes the excess amount is allowed to stay in a few heaps in the midst of the growing crop to be used for the succeeding crop of cotton or sugarcane ; if the crop thrives and has a healthy deep green appearance no manure is used, but if it looks yellowish green, which indicates that the soil is poor in strength, the manure from the heaps is scattered with baskets over the field on which the crop is growing.

If it is intended that land should be manured and strengthened for growing sugarcane or cotton after *senji metha*, the cattle are folded in the field and fed on the crop as long as it will maintain them. To secure a uniform distribution of the dung dropped in this way, the position of the cattle is shifted daily as the crop is cut and the land made fallow. The field is ploughed three or four days after being thus manured. When other manure is lacking, *kallar* or earth of old village sites, may be applied. Green manuring is sometimes tried ; *san* (hemp) is grown and when the plants are 3 to 4 feet high they are ploughed into the soil. Such manured fields are generally sown with wheat. Ashes of fuel are also used as manure, but, as a rule, only for vegetables. *Niain* lands, which are enriched naturally because of their situation in the immediate neighbourhood of the village *abadi*, are never manured.

- II. 7. 7. Two holdings were examined in detail to show actual operations month by month.

I.—U. S's HOLDING.

The area of this holding in the year 1924-25 was as follows:—

II. 7

<i>Chahi.</i>		<i>Barani.</i>		<i>Total.</i>	
<i>Kanals.</i>	<i>Marlas.</i>	<i>Kanals.</i>	<i>Marlas.</i>	<i>Kanals.</i>	<i>Marlas.</i>
69	0	153	6	222	6
(6·51 ac.)		(14·46 ac.)		(20·97 ac.)	

On his holding U. S. grew the following crops:—

Crop	KHARIF.				RABI			
	<i>Chahi.</i>		<i>Barani.</i>		<i>Chahi.</i>		<i>Barani.</i>	
	Ks.	Ms.	Ks.	Ms.	Ks.	Ms.	Ks.	Ms.
1. <i>Chari</i> ..	..	..	132	18	..	..	..	..
			(12·60 ac.)					
2. <i>Maize</i> ..	7	0	..	..	..	..	..	..
	(0·66 ac.)							
3. <i>Kamad</i> (Sugarcane)	10	0	..	..	..	..	..	..
	(0·94 ac.)							
4. <i>Wheat</i> ..	..	..	..	..	46	0	13	8
					(4·34 ac.)		(1·27 ac.)	
5. <i>Senji Metha</i> ..	..	..	..	..	7	0	..	..
					(0·66 ac.)			
6. <i>Melons</i> ..	..	..	..	..	6	0	..	..
					(0·56 ac.)			

II.—R. A's HOLDING.

The area of this holding in the year 1924-25 was as follows:—

<i>Chahi.</i>		<i>Barani.</i>		<i>Total.</i>	
<i>Kanals.</i>	<i>Marlas.</i>	<i>Kanals.</i>	<i>Marlas.</i>	<i>Kanals.</i>	<i>Marlas.</i>
39	19	34	1	74	0
(3·77 ac.)		(3·21 ac.)		(6·98 ac.)	

During the year he grew the following crops:—

Crop.	KHARIF.				RABI.			
	<i>Chahi.</i>		<i>Barani.</i>		<i>Chahi.</i>		<i>Barani.</i>	
	Ks.	Ms.	Ks.	Ms.	Ks.	Ms.	Ks.	Ms.
1. <i>Chari</i> ..	2	2	6	14	..	..	..	..
	(0·19 ac.)		(0·63 ac.)					
2. <i>Maize</i> ..	13	5	..	..	..	..	..	..
	(1·25 ac.)							
3. <i>Kamad</i> (Sugarcane)	7	6	..	..	..	..	..	..
	(0·70 ac.)							
4. <i>Cotton</i> ..	1	15	..	..	..	..	..	..
	(0·16 ac.)							
5. <i>Wheat</i> ..	..	..	..	..	4	17	12	14
					(0·46 ac.)		(1·20 ac.)	
6. <i>Wheat & Gram</i>	..	..	..	..	..	..	14	13
							(1·38 ac.)	
7. <i>Sarson & Senji</i>	..	..	..	..	9	19	..	..
					(0·94 ac.)			
8. <i>Melons</i> ..	..	..	..	..	0	15	..	..
					(0·07 ac.)			

II. 7. The operations connected with each of these crops is shown below in the form of a calendar. The time shown for each operation is the average for the number of persons employed in that operation.

TABLE X.—*Showing Agricultural Operations on Two Holdings for One Year.*

Crop.	Holding I : (Area, 20·97 acres.)	Holding II : (Area, 6·98 acres.)
JANUARY.	Hrs. Mins	Hrs. Mins.
<i>Chara</i> .. Nil.		Nil.
<i>Maize</i> .. Nil.		Nil.
<i>Kamad</i> .. Nil.		Cut, cleaned and carted the cane, pressed and made <i>gur</i> , 8 days, 12 hrs a day, 3 men* 96 0 One woman, 8 days, 6 hrs. a day .. 48 0 Picked the plants, one man .. 1 0
Cotton .. (Not grown).		Watered the <i>chahi</i> area once, 3 men* .. 8 10
Wheat .. Watered the <i>chahi</i> area once, 2 men .. 41 24		Nil.
Wheat & Gram (Not grown).		
<i>Sarson & Senji</i> Watered once, 2 men 6 18		Watered once, 3 men* 19 16
Melons .. Nil.		Nil.
	Total .. 47 42	Total .. 172 26
FEBRUARY.	Hrs. Mins.	Hrs. Mins.
<i>Chara</i> .. Nil.		Nil.
<i>Maize</i> .. Nil.		Nil.
<i>Kamad</i> .. Nil.		Nil.
Cotton .. (Not grown).		Nil.
Wheat .. Nil		Nil.
Wheat & Gram (Not grown).		Nil.
<i>Sarson & Senji</i> Cut the crop for cat- tle, 5 days, 1 hr. per day, 2 men .. 5 0 Carting crop home and unloading, 5 cart- loads, 1 hr. per load, 2 men .. 5 0		Cut the crop for cat- tle, 10 days, 1 hr. per day, one man 10 0 Carrying crop home on head, 10 days, 1 hr. per day, one man .. 10 0
Melons .. Nil.		Nil.
	Total .. 10 0	Total .. 20 0

* One of the men was a hired labourer.

Crop.	Holding I. (Area, 20.97 acres).		Holding II : (Area, 6.98 acres).	
MARCH.	Hrs. Mins		Hrs. Mins.	
<i>Cham</i> ..	Nil.		Nil.	
<i>Maize</i> ..	Nil.		Nil.	
<i>Kamad</i> ..	Watered once before sowing, 2 men..	9 0	Watered once before sowing, 3 men.. Ploughed 5 times with one yoke, one man Used <i>sohaga</i> once, one man..	14 8 28 20 1 2
<i>Cotton</i> ..	(Not grown).		Nil.	
<i>Wheat</i> ..	Nil.		Nil.	
<i>Wheat & Gram</i>	(Not grown).		Nil.	
<i>Sarson & Senji</i>	Nil.		Cut the crop for cat- tle, 20 days, 1 hr. per day, one man..	20 0
			Carrying crop home on head, 20 days, 1 hr. per day, one man	20 0
			Reaping remainder of crop, 3 days, 7 hrs. per day, 3 men..	21 0
			Carrying crop home on head in 4 loads, 2 men..	6 0
<i>Melons</i> ..	Watered once pre- paratory to sowing, 2 men..	5 24	Watered once pre- paratory to sowing, 2 men..	1 27
	Ploughed 5 times with 2 yoke and sowed, 2 men..	10 0	Ploughed twice and sowed, one man..	1 10
			Used <i>sohaga</i> twice, one man..	0 13
			Made beds, 2 men..	0 30
	<i>Total</i> .. 24 24		<i>Total</i> .. 113 50	

II 7.

Crop.	Holding I: (Area, 20·97 acres).		Holding II (Area, 6·98 acres).	
	Hrs. Mins.		Hrs. Mins.	
APRIL.				
<i>Chara</i> ..	Nil.		Nil.	
<i>Maize</i> ..	Nil		Nil.	
<i>Kamad</i> ..	Ploughed 6 times with 2 yoke, 2 men..	20 0	Ploughed twice and covered seed, one man ..	11 20
	Covered seed with yoke, one man ..	3 20		
	Sowing seed, 3 men	3 20	Sowing, 3 persons: 2 men and one woman	5 40
	Used <i>sohaga</i> 9 times with 2 yoke, 2 men	11 5	Used <i>sohaga</i> 3 times, one man..	3 6
	Made beds, 4 men* ..	1 30	Watered twice, 3 men..	28 16
	Watered once, 2 men	9 0	Weeded twice, 3 men	20 0
	Weeded once, 4 men*	10 0	one man	10 0
<i>Cotton</i> ..	(Not grown).		Watered once, 2 men	3 23
			Ploughed twice and sowed, one man..	2 43
			Used <i>sohaga</i> twice, one man..	0 30
			Made beds, 2 men..	0 45
<i>Wheat</i> .	Cutting and collecting harvest, 5 days, 14 hrs. a day, 5 men†..	70 0	Cut and collected harvest, and carted to threshing floor, 7 days, 14 hrs. a day 3 men..	98 0
	Threshing 375 bund- les, 3 men .	157 30		
	Winnowing 375 bund- les, 3 men..	105 0		
<i>Wheat & Gram</i>	(Not grown)			
<i>Sarson & Senja</i> ..	Nil.		Nil.	
<i>Melons</i> ..	Used <i>sohaga</i> thrice with 2 yoke, 2 men	2 13	Watered twice, 2 men	2 54
	Watered once, 2 men	5 24	Weeded twice, 1 man	5 0
	Made beds before wat- ering, 2 men..	1 20		
		Total ..	399 42	Total . 197 17

* One of the men was a hired labourer.

† Two of the men were hired labourers.

Crop.	Holding I : (Area, 20·97 acres).	Holding II : (Area, 6·98 acres).
MAY.	Hrs. Mins.	Hrs. Mins.
<i>Chari</i> ..	Nil.	Ploughed twice with one yoke, 1 man .. 6 46
<i>Maize</i> ..	Nil.	Nil.
<i>Kamad</i> ..	Watered once, 2 men 9 0 Weeded once, 1 men* 10 0 Fencing the field, in- cluding time taken in cutting branches from trees to use in fence, 4 men*.. 20 0	Watered twice, 3 men 28 16 Weeded twice, 3 men 20 0 one man 10 0
<i>Cotton</i> ..	(Not grown).	Nil.
<i>Wheat</i> ..	Carting home and unloading in 7 loads, 2 men. 10 30	Threshed, winnowed and carted home, 15 days, 14 hrs. a day 3 men.. 210 0
<i>Wheat & Gram.</i> ..	(Not grown).	Nil.
<i>Sarson & Senja</i> ..	Nil	Nil.
<i>Melons</i> ..	Weeded once, 4 men* 6 0 Watered once, 2 men 5 24 Carrying crop home, 20 days, 1 hr. a day, one man . 20 0	Watered once, 2 men 1 27
	<i>Total</i> .. 80 54	<i>Total</i> .. 276 29
JUNE.	Hrs. Mins.	Hrs. Mins.
<i>Chari</i> ..	Nil.	Watered <i>chahr</i> area once preparatory to sowing, 2 men.. 4 4 Sowing, one man.. 0 8 Ploughing once, one man.. 1 38 Used <i>sohaga</i> once, one man. 0 18 Made beds, 2 men .. 1 0 Watered once, 2 men 4 4
<i>Maize</i> ..	Loading and carting 21 loads of manure to the field, 5 days, 2 men.. 31 30	Carting 50 loads of manure to the field, each trip of 1 hr. 50 mins., 2 men.. 91 40
<i>Kamad</i> ..	Watered twice, 2 men 18 0	Watered thrice, 3 men 42 24
<i>Cotton</i> ..	(Not grown).	Watered twice, 3 men 6 46
<i>Wheat</i> ..	Carting and heaping manure in field, 15 loads, 1½ hrs. per load, 2 men.. 22 30	Carting 15 loads of manure to <i>chahr</i> field, each trip 1 hr. 50 mins., 2 men.. 27 30
<i>Wheat & Gram.</i> ..	(Not grown).	Nil.
<i>Sarson & Senja</i> ..	Nil.	Nil.
<i>Melons</i> ..	Carrying crop home, 20 days, 1 hr. a day, one man.. 20 0	Nil.
	<i>Total</i> .. 92 0	<i>Total</i> .. 179 32

* Including one hired labourer.

H. 7.	Holding I : (Area, 20.97 acres).		Holding II : (Area, 6.98 acres).	
	Crop.	Hrs. Mins.		Hrs Mins
	JULY.			
	<i>Chara</i> .. Sowing, 2 men..	3 0	Sowed <i>barani</i> area, one man.	0 20
	Ploughing with 2 yoke, 2 men ..	44 18	Ploughed, one man.	5 8
	Used <i>sohaga</i> once with 4 oxen on 70 <i>kanals</i> , 2 men..	8 37	Used <i>sohaga</i> once, one man..	1 0
	Made beds, 4 men*..	6 0	Made beds, 2 men..	1 0
	<i>Maize</i> .. Scattered manure, 2 men..	3 0	Scattered manure, 2 men..	3 0
	Ploughed with 2 yoke five times, 2 men..	11 40	Ploughed thrice one man..	30 52
	Sowed by <i>kera</i> method, 2 men..	2 20	Used <i>sohaga</i> once, one man..	1 52
	Used <i>sohaga</i> twice with 2 yoke, 2 men..	1 44	Sowed, one man..	10 37
	Made beds, 4 men*..	1 0		
	<i>Kamad</i> Weeded and cut grass for cattle from crops, 10 days, 2 hrs. a day, 2 men..	20 0	Nil.	
	<i>Cotton</i> .. (Not grown).		Weeded once, 2 men	3 0
	<i>Wheat</i> .. Nil.		Strengthened field boundaries, 2 men	2 0
	<i>Wheat & Gram</i> (Not grown).		Nil.	
	<i>Sarson & Senji</i> Nil.		Nil.	
	<i>Melons</i> .. Nil.		Nil.	
	<i>Total</i> ..	101 39	<i>Total</i> ..	58 49

* Including one hired labourer.

Crop.	Holding I : (Area, 20 97 acres)	Holding II : (Area, 6 98 acres).
AUGUST.	Hrs Mins	Hrs. Mins.
<i>Chari</i> ..	Nil.	Cutting crop, 10 days, 1 hr. a day, one man 10 0
<i>Maize</i> ..	Watered twice, 2 men 12 36	Watered twice, 3 men .. 51 18
	Weeded once, 3 men 10 0	Weeded once, 3 men 20 0
<i>Kamad</i> ..	Nil.	Watered once, 3 men 14 8
Cotton ..	(Not grown)	Nil.
Wheat ..	Ploughed twice with 2 yoke. 2 men 46 28	Ploughed <i>chahi</i> area twice, one man. 7 32
Wheat & Gram	(Not grown)	Ploughed <i>barani</i> area thrice, one man 29 36
<i>Sarson & Senja</i>	Nil.	Ploughed twice, one man .. 22 44
Melons ..	Nil.	Nil.
	<i>Total</i> .. 69 4	<i>Total</i> .. 155 18
SEPTEMBER.	Hrs. Mins.	Hrs. Mins.
<i>Chari</i> ..	Strengthened field boundaries, 2 men .. 6 0	Strengthened bound- aries during rain, one man .. 2 0
	Cut the crop for cattle, 15 days, 3 hrs. a day, 2 men .. 45 0	Cut the crop, 20 days, 1 hr. a day, one man .. 20 0
	Carting crop home in 15 loads, one man .. 12 30	
<i>Maize</i> ..	Weeded once, 3 men 10 0	Nil.
<i>Kamad</i> ..	Tied heads of cane together, 3 men .. 4 0	Nil.
Cotton	(Not grown.)	Weeding crop, 5 days, 1 hr. a day, one woman .. 5 0
Wheat ..	Strengthened field boundaries, 2 men .. 3 0	Ploughed <i>barani</i> area twice, one man .. 19 44
	Ploughed once with 2 yoke, 2 men .. 23 14	
Wheat & Gram	(Not grown).	Ploughed once, one man .. 11 22
<i>Sarson & Senja</i>	Nil.	Nil.
Melons ..	Nil.	Nil.
	<i>Total</i> .. 103 44	<i>Total</i> .. 58 6

II. 7.

Crop.		Holding I: (Area, 20.97 acres).		Holding II: (Area, 6.98 acres).	
OCTOBER.		Hrs. Min.		Hrs. Min.	
<i>Chara</i>	.. Cutting crop for cattle for 25 days, 3 hrs a day, 2 men..	75	0	Harvested crop, 2 men	7 30
	Carting crop home in 25 loads, one man..	20	50	Carrying home and un- loading in 3 loads, 2 men..	4 30
	Harvesting crop, 5 days, 10 hrs. a day, 5 men*	50	0		
<i>Maize</i>	.. Watered once, 2 men..	6	18	Watered once, 3 men	.25 39
	Harvesting, 3 men..	3	0	Harvesting, 2 men..	8 0
	Carrying crop to village in 4 loads, 2 men	3	10	Carting crop home in 5 loads, including loading and unloading time 2 men..	10 0
	Unloading and placing in <i>moharas</i> , 2 men ..	2	0	one man..	5 0
<i>Kamad</i>	.. Nil.			Watered once, 3 men..	14 8
<i>Cotton</i>	.. (Not grown.)			Picked cotton, 4 days, 1 hr. a day, one woman..	4 0
				Watered once, 2 men..	3 23
<i>Wheat</i>	.. Watered <i>chahi</i> area preparatory to sowing, 2 men ..	41	24	Watered <i>chahi</i> area once, 3 men	. 8 10
	Ploughed whole area twice, 2 men ..	46	28	Ploughed twice, one man..	7 32
	Used <i>sohaga</i> thrice, 2 men ..	21	57	Scattering manure, 2 men..	2 0
	Scattered manure, 2 men ..	2	0	Sowed <i>chahi</i> area one man..	3 46
				Ploughed <i>barani</i> area thrice, one man..	29 36
				Sowed <i>barani</i> area, one man..	9 52
<i>Wheat & Gram</i>	.. (Not grown.)			Nil.	
<i>Sarson & Senji</i>	.. Sowing seed and hoe- ing 3 men..	9	0	Nil.	
	Watered once, 2 men..	6	18		
<i>Melons</i>	.. Nil.			Nil.	
Total ..		287	25	Total ..	143 6

*Including 2 hired labourers.

Crop.	Holding I : (Area, 20 97 acres).	Holding II : (Area, 6'98 acres).
NOVEMBER.	Hrs. Min.	Hrs. Min.
<i>Chan</i>	.. Cutting crop for cattle, 5 days, 10 hrs. a day, 3 men.. 50 0 .. Harvesting crop, 3 men.. 8 0 Carting home and storing, in 10 loads, 2 men.. 8 10	Nil.
Maize	.. Separating cobs 3 days, 7 hrs. a day 3 men } 21 0 2 women }	Separating cobs 4 days, 9 hrs a day 2 men } 36 0 2 women }
<i>Kamad</i>	Nil	Nil.
Cotton	.. (Not grown).	Picked cotton, 6 days, 1 hr per day. 2 women.. 6 0
Wheat	.. Ploughed with 2 yoke, 2 men.. 23 14 Sowed, 2 men.. 23 14 Used <i>sohaga</i> once with 2 yoke, 2 men .. 7 19 Made beds, 4 men* .. 7 0 Watered <i>chahi</i> area once, 2 men.. 41 24 (Not grown).	Used <i>sohaga</i> on <i>chahi</i> area three times, one man. 1 52 Used <i>sohaga</i> on <i>barani</i> area four times, one man.. 7 12 Made beds on whole area, 2 men .. 4 0
Wheat & Gram		Ploughed 4 times, one man.. 45 28 Sowed, one man 11 22 Made beds, 2 men.. 3 0
<i>Sarson & Senji</i>	Watered twice, 2 men.. 12 36	Sowed, one man.. 0 30 Hoed, one day, 3 men 12 0 Watered twice, 3 men.. 38 32
Melons	Nil.	Nil.
	Total .. 201 57	Total .. 165 56

* Including one hired labourer.

II. 7.

Crop.	Holding I : (Area, 20·97 acres).	Holding II · (Area, 6·98 acres)
DECEMBER.	Hrs. Mins	Hrs Mins
<i>Chari</i> .. Nil.		Nil.
Maize .. Beating (threshing) cobs 2 days, 8 hrs. a day, 4 men*.. 16 0 2 days, 4 hrs. a day, 2 women.. 8 0		Beating (threshing) cobs, 3 days, 8 hrs. a day, 2 men.. } 24 0 2 women . }
<i>Kamad</i> .. Cutting, cleaning and pressing canes and making <i>gur</i> , 23 days, 12 hrs. a day, 5 men† 276 0		Nil.
Cotton .. (Not grown).		Picked cotton, 8 days, 1 hr. per day 2 women.. 8 0
Wheat .. Weeded once, 5 days, 8 hrs a day, 4 men*.. 40 0 Watered <i>chahi</i> area once, 2 men.. 41 24		Weeded whole area once, 2 days, 8 hrs a day, 3 men.. 16 0 Watered <i>chahi</i> area once, 3 men .. 8 10
Wheat & Gram (Not grown).		Nil.
<i>Sarson & Senji</i> Nil.		Watered once, 3 men .. 19 16
Melons .. Nil.		Nil.
	<i>Total</i> .. 381 24	<i>Total</i> .. 75 26

* Including one hired labourer.

† Including two hired labourers.

A short summary of the main points brought out in this calendar of operations may now be attempted. Holding No. I. comprised 20·97 acres made up of 6·51 acres *chahi* and 14·46 acres *barani*; Holding No. II. 6·98 acres, 3·77 acres being *chahi* and 3·21 *barani*. There were three male working members in the family of the first holding and two in the second. The total number of hours worked by these family members in the course of the year came to 4,402 and 3,357, or 1,467 and 1,679 hours per member respectively. If a day be taken as the equivalent of 8 hours, each man in the case of the first holding worked in the course of the year for 183 days, and in the case of the second holding 210 days.

Hired labour, in addition to the above, accounts for 910 hours in the first II. 7. holding and 123 hours in the second. The women of the family add another 58 hours and 207 hours, respectively. Thus the total number of hours of one man (including the labour of the women) spent on each of these holdings in the course of the year comes to 5,370 and 3,687, respectively. Taking the acreage into account, the balance is very much in favour of the smaller holding, for the former figure gives 256 hours per acre as against 528 in the case of the latter.

The wide variation in the demand for labour from month to month is well brought out in the calendar. In the following statement the number of hours worked in each month on each of the two holdings is given as a percentage of the total number of hours spent on it in the course of the year.

TABLE XI.—*Showing the Percentage Number of Hours worked on each Holding in each Month.*

Holding.	January.	February	March.	April.	May	June.	July.	August.	September.	October.	November.	December.
I. ..	1·8	0·4	0·9	24·1	4·0	2·7	4·3	2·7	4·3	13·3	10·0	31·2
II. ..	11·4	0·5	5·4	13·6	21·0	11·1	1·8	8·9	1·5	7·4	10·8	6·6
<i>Average</i>	6·6	0·4	3·2	18·8	12·8	7·2	2·9	5·8	2·8	10·3	10·2	19·1

It is interesting to note that taking the average of the two holdings some 70 per cent. of the year's labour was expended in the months of April, May, October, November and December, while the five months of February, March, July, August and September only accounted for 15 per cent. So far as time is concerned there are, as has often been pointed out, great opportunities for industries subsidiary to agriculture.

8. There are no canals in this District. All irrigation in the village II. 8. is from wells. Maize, sugarcane, cotton and vegetables are the chief *kharif* crops, and wheat, barley, *senji metha* (fodder) and vegetables the chief *rabi* crops which are ordinarily irrigated. *Chari* is a *kharif* fodder crop which is generally grown on *barani* land. If the amount of wheat straw produced in the preceding *rabi* harvest is expected to be less than the year's requirements, the *zemindar* sows some 3 or 4 *kanals* of *chari* fodder earlier than usual, i.e., in the month of May or June instead of in July. When this is so, the *chari* is sown on *chahi* land so that it may be ready sooner

II. 8.

The number and dates of waterings for the crops vary somewhat from year to year with changes in the dates and times of rainfall, joint shares in wells, individual circumstances, etc.

The following table gives the usual dates and number of waterings for each of the crops, and the number of waterings which the *zemindars* consider necessary to give the best results. For giving the usual dates and number of waterings for each crop, R. A.'s case has been investigated. It states what he did during the year.

TABLE XII.—*Statement showing the Dates and the Number of Waterings given to each of his Crops by R. A.*

Month.	KHARIF				RABI		
	Chara (fodder).	Sugarcane.	Cotton.	Maize	Wheat.	Seni metha	Melons and Vegetables.
January	.	.	.		10th	12—13th	
February	.	.	..				..
March	..	26—27th					21st
April	..	{ 18-19th 28-29th	16th				{ 10th 25th
May	.	{ 11-12th 20-21st	.				10th
June	. 17th	{ 1-2nd 11-12th 22-23rd	{ 1st 29th				
July	.. 6th	..	..		..	.
August	..	18-19th	..	{ 4-7th 20-23rd	..		
September	.. ..	..	..	..	.	.
October	..	..	12th	15-16th	25th*	..	
November	.. ..	15-16th	..		..	7-8th	.
December	..	.	.	.	14th	2-3rd	..
No. of waterings given to each crop	2	10	4	3	3	3	4
Usual No. of waterings	3	10-12	4	3	2-3	5-6	4
No. of waterings considered ne- cessary by the <i>zemindars</i> to give the best results	4	20	5	4	5†	7	8

* Preparatory to sowing.

† Including that preparatory to sowing.

9. As has been mentioned earlier there are no canals in the District. II. 9.
Fields are carefully levelled for irrigation by wells to effect uniform distribution of water. The waste of water in the operation is appreciable, though the *zemindar* regards it as normal and not open to remedy. The village cattle usually drink water from wells at work, and the water is also often used for washing them with the result that it falls away from the proper channel. People who employ no water-carrier, and those who need water for any extra purpose fetch it from wells at work in the neighbourhood of the village *abadi*. It is no waste from the general standpoint, but is a loss so far as the workers of the wells are concerned.

The channels are always of earth and often have weeds growing in them. While water is in flow it is kept within the channel by lining the sides with clay; but this is often washed away, and water is lost through percolation or overflow. Where a channel runs across some public road, as it often does, the waste is unavoidable. Carts and other traffic in crossing repeatedly knock down the sides of the channels and lead to much waste of water despite every effort of the supervisor.

10. The chief crops here are wheat, maize, cotton and sugarcane. II. 10

Usually for the wheat crop from four to six ploughings are given to *chahi* land and from six to eight to *barani* land. The more is the number of ploughings, the greater is the retentiveness of the soil to water. Land left vacant for the wheat crop in the coming harvest, (and *barani* land is usually so left), and land on which *chari* fodder crop is to be followed by wheat next year are ploughed once or twice in *Chet* (March-April) after the rains have softened the soil, and the remainder of the ploughings begin in *Sawan* (July-August) in suitable days of the rainy season and continue till the crop is sown in the beginning of winter. The number of ploughings varies with the physical character of the soil: hard soil requires more ploughings than soft.

Maize is never grown on *barani* lands; *chahi* lands are reserved for it. Usually two or three ploughings are given for this crop; they begin in the last week of *Har* (8th to 15th July) after the soil has received one or two showers of rain. If the rains are delayed till the 15th of *Sawan* (31st July), well-irrigation is resorted to for the preparation of the soil for ploughing, and sowing takes place immediately, *i. e.*, before *Sawan* is over, (15th August). The number of ploughings varies from one to five; where only one ploughing is given, greater attention is directed to weeding, and as the number of ploughings increases less attention is devoted to weeding.

- II. 10. Cotton sowing times vary considerably. From *Chet* (March-April) to *Sawan* (July-August) it may be sown at any suitable date. In rotation it follows a *senji metha* crop, or cane, if sown in *Chet* or early in *Baisakh* (April-May), and wheat if sown later before *Sawan*. The ploughings given for the crop are usually two or three in number immediately before sowing but may, however, be from one to six. A larger number of ploughings tends to render less weeding necessary.

For growing sugarcane the number of ploughings varies from four to eight ; it may reach eleven if the rotation is faulty and manure is lacking, e.g., a cane crop on the heels of a *chari* fodder crop is a faulty rotation. The ploughings begin immediately before sowing when grown in a proper rotation ; otherwise some two or three additional ploughings are given in winter, after showers have made the soil soft and amenable to ploughing.

- II. 11. 11. Generally, only the chief crops are weeded but vegetables invariably. The wheat crop is weeded once or twice, an attempt being made to remove *piazi* (a weed of the onion variety). Maize has to be weeded twice or thrice as the monsoon rains help their growth. Cases have been found in which only one weeding and even in which none at all was done. It is to be noted, however, that keepers of cattle other than *zemindars*, usually remove the weeds, not for the benefit of the crops, but for cattle food ; there is no hoeing in such cases. For a cane crop weeding is usually done four times, although the number varies from one to six ; cotton once or twice only ; and crops like tobacco, onions, etc., from two to five times.

Weeding is done by cultivators themselves, particularly if tenants. Cultivating owners keep their *sepi chamars* with them throughout the year for the work ; they may also employ additional labour when, after rains, weeding has to be finished soon. The *sepi chamar* feeds at the expense of the cultivator at such times and also takes away the weeds for his cattle.

- II. 12. 12. The implements in use are more or less primitive. Experiments with the Raja, Meston and Jat ploughs sent out by the Agricultural Department have been made by the cultivators of the village, but the improvements have not caught on for the following reasons :—

(a). Though these ploughs make a deep, wide furrow, they throw the soil to one side only with the result that there is a loss of level, while the native plough works uniformly to both sides and hence no such loss.

(b). The implements are thought to require horses or good strong oxen, which are beyond the financial capacity of *zemindars* to purchase and to maintain. II. 12.

(c). These ploughs require fields large enough on which to work; here the fields are small and the holdings scattered.

(d). The implements recommended are too costly for the *zemindars*.

(e). The local blacksmiths are unable to repair them and the *zemindars* are discouraged by this drawback.

13. With regard to the adoption of selected varieties of seeds, the cultivators have followed the example of some of their relatives in the neighbourhood and in the Canal Colonies. II. 13.

Kankoo (Pusa No. 12) and *Lalkasar* (Punjab Type 8-A) wheats have been tried by G. N. and a few others. It has been found that *kankoo* requires double the amount of seed needed in the case of native wheats. Its grain is comparatively large and white, and for baking and eating its superiority is recognized. Its cultivation, however, is declining as there is much fall and loss of grain in harvesting. The outward covering of the grain tends to open as the ripening point is reached, and there is much waste in the operations of cutting and carrying; harvesting has been tried two days earlier, but the loss of grain has not been avoided. Further, the crushing of the straw in the course of threshing has been found more difficult, although the winnowing is easier because of the large size of the grain. *Lalkasar* cultivation is extending; there is no waste and it is superior for baking and eating. Its threshing is similar to that of native varieties; it gives a better yield and this is recognized by the cultivators who also realise the superiority of both *Kankoo* and *Lalkasar* as regards ability to survive frost and shortage of rain. This year (1925-26) the failure of winter rains and attacks of frost have damaged native wheats, but these other varieties are thriving.

Sugarcane. S tried Coimbatore No. 205 (a superior variety of sugarcane) or *Kahoo*, as it is locally called, fetching the seed from Dhaliwal in Nakodar *Tahsil*. Unlike the native crop, every plant when fully grown bears a stalk at the top like a maize plant. He has pressed only two *marlas* of the crop, and the remaining eight *marlas* have been preserved for seed for next year. The yield of *shakkar* (yellow sugar) was nine maunds per *kanal*. The best land here yields in the case of local varieties

II. 13. only four maunds of *gur* at the highest. Ordinarily the yield varies from two to three maunds. M. B. also tried Coimbatore No. 205. The yield of *gur* in his case was sixteen seers per *marla*, or eight maunds per *kanal*. The superiority of this variety in yield is being appreciated and cultivation is expected to spread. Its seed sells at the rate of Rs. 50/- per *kanal*, while that of the native variety is only Rs. 15/- to Rs. 20/- per *kanal*. Owing to the high price of its seeds, the *zemindar* hesitates to cultivate it and prefers to purchase a small quantity in the beginning and to keep the whole produce for seed until he has sufficient for his own needs. The variety withstands rats and receives little injury from white ants and *groona*—a worm which eats at the roots of the plant underground. It is hard to eat and press.

II. 14. 14. There has been very little improvement in the methods of cultivation, except that iron buckets on wells are displacing the *charsa* or large leathern bags for irrigation. Of the total of 99 wells, 17 are worked by means of Persian wheels with iron buckets. Of these, 3 are in the *Dhaha* and 14 in the *Bet*. The number would probably have been greater had not most of the wells been owned by many co-sharers. Working a well with the leathern *charsa* requires 3 people at least, of whom 2 must be men, *viz.*, the driver of the oxen and the holder of the bag ; the third, who directs the flow of water, may be a woman or a child about 10 years of age ; to work a Persian wheel only two people are required ; they may be women or children ; this economises labour.

II. 15. 15. The nearest Demonstration Farm is at Ludhiana ; another is at Jullundur, the District Headquarters. Demonstrations of Meston, Raja and Jat ploughs have been made in the village, but with little effect. B., a *sufedposh*, is the only villager who has visited the experimental farms at Jullundur, Ludhiana, Gurdaspur and Lyallpur. He is also a member of the District Agricultural Association, of which the other *zemindars* know little. The village has derived little benefit from the existence of the Association.

II. 16. 16. The nearest rain-gauge is at Phillour about three miles away. Monthly figures of rainfall for each of the years from 1915 to 1924 are given in the following table.

TABLE XIII.—*Monthly figures of Rainfall at Phillour for each of the past 10 Years.*

(Recorded at Phillour.)

Year.	January	February.	March	April	May	June	July	August	September.	October	November.	December	Total.
1915	2.17	3.39	1.32	..	..	0.50	1.16	1.12	3.39	0.72	..	0.05	13.82
1916	0.80	1.51	0.20	0.09	..	0.89	7.91	7.47	5.59	0.16	..	..	23.90
1917	0.25	0.06	0.34	3.70	0.19	4.02	9.57	9.16	15.05	6.50	..	..	48.84
1918	0.24	..	3.16	1.35	..	2.36	1.99	6.52	0.21	..	0.04	0.16	15.97
1919	2.99	0.35	0.50	0.37	0.27	0.17	12.85	5.10	1.57	..	..	2.04	26.21
1920	1.17	0.80	1.07	..	1.56	1.17	6.65	2.11	0.44	..	..	..	14.97
1921	0.77	..	..	0.21	0.05	7.60	6.37	6.45	1.89	0.74	..	0.64	24.72
1922	0.69	0.68	0.08	0.47	..	1.03	4.29	3.47	3.60	0.18	..	1.50	16.99
1923	0.94	2.97	0.15	0.12	1.19	0.92	14.43	12.80	..	..	0.08	1.68	35.28
1924	1.52	2.95	..	..	0.72	..	3.77	0.38	8.75	..	..	1.02	19.11
Average	1.08	1.27	0.68	0.63	0.40	1.87	6.90	5.46	4.05	0.83	0.01	0.70	23.88

APPENDIX A. TO CHAPTER II.

TABLE XIV. A.—Statement showing Cropping in Tehong for Kharif 1919 and Rabi 1920.

II.
App.
A.

	Crop	CHARI		BARANI.		Total Matured	Total Kharaba	Total Sown	Percentage of kharaba on sown.
		Matured	Kharaba.	Matured	Kharaba.				
KHARIF 1919.	1. Maize ..	245	6	.	.	245	6	251	2.39
	2. Jowar ..	.	.	1	.	1	.	1	..
	3. Mash ..	1	.	30	3	31	3	34	8.28
	4. Til ..	.	.	1	.	1	.	1	..
	5. Sugarcane ..	119	5	.	.	119	5	124	4.03
	6. Cotton ..	38	.	1	.	38	1	39	2.56
	7. San ..	4	2	15	.	19	2	21	9.52
	8. Vegetables ..	1	.	..	.	1	.	1	..
	9. Vegetable fruits (melons, etc.) ..	.	.	4	1	4	1	5	20.00
	10. Chillies ..	5	.	.	.	5	.	5	..
	11. Chari fodder ..	33	.	504	2	537	2	539	0.37
	Total	446	13	555	7	1,001	20	1,021	195
RABI 1920.	1. Wheat ..	189	169	127	148	316	317	633	5.07
	2. Barley ..	5	11	3	7	8	18	26	69.23
	3. Gram ..	3	2	6	14	9	16	25	64.00
	4. Wheat and Gram ..	25	12	383	136	408	148	556	2.66
	5. Alsi (linseed) ..	1	.	.	.	1	.	1	..
	6. Sarson (Mustard) ..	2	.	.	.	2	.	2	..
	7. Vegetables ..	2	.	..	..	2	.	2	..
	8. Carrots, etc. ..	2	..	.	.	2	..	2	..
	9. Vegetable fruits (melons, etc) ..	23	1	.	.	23	1	24	4.16
	10. Poppy ..	..	1	..	..	.	1	1	100.0
	11. Tobacco ..	3	.	..	..	3	..	3	..
	12. Garlic and Onions ..	2	.	..	..	2	.	2	..
	13. Fodder crops not included above ..	139	81	..	1	139	82	221	37.10
	Total	396	277	519	306	915	583	1,498	38.91

BOTH HARVESTS, Kharif 1919 and Rabi 1920—

1. Total cropped area 1,001+915=1,916 acres.
2. „ kharaba 20+583= 603 „
3. „ sown 1,021+1,498=2,519 „
4. Percentage of kharaba on sown area = 23.9
5. „ „ cropped on cultivated area = 89.8
6. The cultivated area of the village for the year = 2,133 acres.

APPENDIX A.—(continued).

TABLE XIV. B.—Statement showing Cropping in Tehong for Kharif 1920 and Rabi 1921.

	Crop.	CHAHI		BARANT		Total Matured	Total Kharaba	Total Sown	Percentage of kharaba on sown	II. App. A.
		Matured	Kharaba	Matured	Kharaba					
KHARIF 1920	1. <i>Munji</i> (raw rice) ..	1	.	.	.	1	.	1	..	
	2. Maize ..	251	8	5	.	251	13	264	4.92	
	3. <i>Mash</i> ..	1	.	21	.	2	21	23	91.30	
	4. Sugarcane ..	123	1	.	.	123	1	124	0.80	
	5. Cotton ..	49	2	5	.	51	7	58	12.6	
	6. <i>San</i> ..	3	1	6	.	4	7	11	63.63	
	7. Vegetable fruits ..	.	.	2	.	2	.	2	..	
	8. Chillies ..	1	.	.	.	1	.	1	..	
	9. <i>Chara</i> fodder ..	35	1	27	470	62	471	533	8.83	
	Total ..	464	13	33	507	497	520	1,017	51.13	
RABI 1921.	1. Wheat ..	497	130	11	51	508	181	689	26.27	
	2. Barley ..	5	5	.	.	5	5	10	50.00	
	3. Gram ..	1	4	.	.	1	11	12	91.96	
	4. Wheat and Gram ..	25	8	2	.	25	10	35	28.57	
	5. <i>Sarso</i> (mustard) ..	2	.	.	.	2	..	2	.	
	6. Vegetables ..	2	.	.	.	2	..	2	..	
	7. Carrots, etc ..	3	.	..	..	3	..	3	..	
	8. Vegetable fruits (melons, etc) ..	23	.	..	..	23	..	23	.	
	9. Tobacco ..	4	..	.	.	4	.	4	..	
	10. Garlic and Onions ..	3	.	.	.	3	..	3	.	
	11. Fodder crops not included above ..	192	23	..	..	192	23	215	10.69	
	Total ..	757	170	11	60	768	230	998	23.04	

BOTH HARVESTS, Kharif 1920 and Rabi 1921—

1. Total cropped area .. 497+768 = 1,265 acres.
2. „ kharaba .. 520+230 = 750 „
3. „ sown .. 1,017+998 = 2,015 „
4. Percentage of kharaba on sown area .. = 37.2
5. „ „ cropped on cultivated area .. = 59.3
6. The cultivated area of the village for the year .. = 2,133 acres.

APPENDIX A.—(continued).

TABLE XIV. C.—Statement showing Cropping in Tehong for Kharif 1921 and Rabi 1922.

II.
App.
A.

	Crop.	CHIAHI.		BARANI		Total Matured.	Total Kharaba	Total Sown	Percentage of kharaba on sown.
		Matured.	Kharaba	Matured	Kharaba				
KHARIF 1921	1. Maize ..	247	9	1	5	248	14	262	5.03
	2. Jowar ..	1	.	1	.	2	..	2	.
	3. Mash ..	5	.	19	15	24	15	39	38.46
	4. Tal ..	.	.	2	.	2	..	2	.
	5. Sugarcane ..	97	3	.	.	97	3	100	3.00
	6. Cotton ..	14	.	1	.	15	..	15	.
	7. San ..	4	1	8	1	12	2	14	14.28
	8. Vegetable fruits ..	1	..	5	1	6	1	7	14.28
	9. Chillies ..	1	.	.	..	1	.	1	.
	10. Chara fodder ..	59	.	477	37	536	37	573	6.45
	Total	429	13	514	59	943	72	1,015	7.09
RABI 1922.	1. Wheat ..	414	7	231	25	645	32	677	4.73
	2. Barley ..	7	1	3	7	10	8	18	34.44
	3. Gram ..	2	.	15	78	17	78	95	82.10
	4. Wheat and Gram ..	77	.	324	94	401	94	495	18.98
	5. Massar ..	..	..	..	1	..	1	1	100.0
	6. Sarson (mustard) ..	4	..	.	4	..	4	4	..
	7. Taramira (oil-seeds) ..	.	..	.	3	.	3	3	100.0
	8. Vegetables ..	1	.	.	.	1	..	1	..
	9. Carrots, etc. ..	5	.	..	.	5	..	5	..
	10. Vegetable fruits ..	16	..	..	.	16	.	16	.
	11. Tobacco ..	13	.	.	.	13	.	13	.
	12. Garlic and Onions ..	3	.	..	.	3	..	3	.
	13. Fodder crops not included above ..	230	3	.	.	230	3	233	1.28
	Total	772	11	573	208	1,345	219	1,564	14.00

BOTH HARVESTS, Kharif 1921 and Rabi 1922—

1. Total cropped area 943+1,345 = 2,288 acres.
2. „ kharaba 72+ 219 = 291 „
3. „ sown 1,015+1,564 = 2,579 „
4. Percentage of kharaba on sown area = 11.3
5. „ „ cropped on cultivated area = 107.3
6. The cultivated area of the village for the year = 2,133 acres.

APPENDIX A—(continued).

TABLE XIV. D.—Statement showing Cropping in Tehong for Kharif 1922 and Rabi 1923.

	Crop.	CHAHI.		BARANI		Total Matured.	Total Kharaba.	Total Sown.	Percentage of Kharaba on sown
		Matured	Kharaba	Matured	Kharaba.				
KHARIF 1922	1. Maize ..	272	2	1	1	272	3	275	1.09
	2. Jowar ..	..	..	1	..	1	..	1	..
	3. Mash ..	2	..	15	..	17	..	17	..
	4. Til ..	1	..	1	..	2	..	2	..
	5. Sugarcane ..	117	2	..	..	117	2	119	1.68
	6. Cotton ..	24	1	1	..	25	1	26	3.84
	7. San ..	6	..	9	2	15	2	17	11.76
	8. Water Melons ..	..	..	6	2	6	2	8	25.00
	9. Chillies ..	2	..	..	..	2	..	2	..
	10. Chara fodder ..	24	..	549	7	573	7	580	1.20
	Total ..	448	5	582	12	1,030	17	1,047	1.62
RABI 1923.	1. Wheat ..	369	1	203	3	572	4	576	0.69
	2. Barley ..	8	..	5	..	13	..	13	..
	3. Gram ..	..	..	13	13	13	13	26	50.00
	4. Wheat and Gram ..	63	..	446	3	509	3	512	0.58
	5. Vegetables ..	3	..	..	..	3	..	3	..
	6. Carrots, etc. ..	3	..	..	..	3	..	3	..
	7. Tobacco ..	6	..	..	..	6	..	6	..
	8. Melons ..	22	1	..	..	22	1	23	4.34
	9. Garlic and Onions ..	1	..	..	..	1	..	1	..
	10. Fodder crops not included above ..	244	1	..	..	244	1	245	0.40
	Total ..	719	3	667	19	1,386	22	1,408	1.56

BOTH HARVESTS, Kharif 1922 and Rabi 1923—

1. Total cropped area ..	..	..	1,030+1,386	= 2,416 acres
2. „ kharaba ..	..	..	17+ 22	= 39 „
3. „ sown ..	..	..	1,047+1,408	= 2,455 „
4. Percentage of kharaba on sown area ..	..	..	..	= 1.59
5. „ „ cropped on cultivated area ..	..	..	..	= 113.26
6. The cultivated area of the village for the year ..	..	..	..	= 2,133 acres.

II.
App.
A.

APPENDIX A.—(concluded).

TABLE XIV. E.—Statement showing Cropping in Tehong for Kharif 1923 and Rabi 1924.

II.
App.
A.

Crop	CHAH.		BARAN.		Total Matured	Total Kharaba.	Total Sown	Percentage of kharaba on sown.
	Matured.	Kharaba.	Matured	Kharaba				
KHARIF 1923.								
1. Maize .	222	10	..	3	222	13	235	5.53
2. Jowar .	..	..	17	..	17	..	17	..
3. Mung .	..	..	2	..	2	..	2	..
4. Mash .	3	..	16	2	19	2	21	9.52
5. Sugarcane .	114	1	..	..	114	1	115	0.8
6. Cotton .	28	2	1	1	29	3	32	9.37
7. San .	..	1	15	1	16	1	17	5.88
8. Vegetable fruits .	..	..	3	..	3	..	3	..
9. Chillies .	4	..	..	..	4	..	4	..
10. Chara fodder .	3	507	12	..	510	12	522	2.29
<i>Total</i>	375	13	561	19	936	32	968	3.36
RABI 1924.								
1. Wheat .	427	3	605	22	1,032	25	1,057	2.36
2. Barley .	5	..	28	7	33	7	40	17.5
3. Wheat and Barley .	1	..	3	..	4	..	4	..
4. Gram .	1	..	15	2	16	2	18	11.11
5. Wheat and Gram .	42	..	102	2	144	2	146	1.36
6. Oats .	..	..	..	1	..	1	1	100.0
7. Vegetables, etc. .	1	..	..	..	1	..	1	..
8. Potatoes .	2	..	..	..	2	..	2	..
9. Vegetables .	25	..	..	..	25	..	25	..
10. Tobacco .	8	..	..	..	8	..	8	..
11. Garlic and Onions .	2	..	..	..	2	..	2	..
12. Sonf (amseed) .	1	..	..	..	1	..	1	..
13. Fodder crops not included above .	219	3	..	1	219	4	223	1.79
<i>Total</i>	734	6	753	35	1,487	41	1,528	3.63

BOTH HARVESTS, Kharif 1923 and Rabi 1924—

1. Total cropped area ..	..	..	936+1,487	= 2,423 acres.
2. „ kharaba ..	..	..	32+41	= 73 „
3. „ sown ..	..	..	968+1,528	= 2,496 „
4. Percentage of kharaba on sown area ..	..	..	..	= 2.9
5. „ „ cropped on cultivated area .	..	..	..	= 112.1
6. Total cultivated area of the village for the year ..	..	..	..	= 2,161 acres

APPENDIX B TO CHAPTER II.

TABLE XV. A.—Statement showing the Rotation of Crops on 25 Chahi Fields in Tehong during the last eight Harvests, Kharif 1921 to Rabi 1925.

Serial No.	Khara No.	HARVESTS.							
		Kharif 1921	Rabi 1922	Kharif 1922	Rabi 1923.	Kharif 1923.	Rabi 1924.	Kharif 1924.	Rabi 1925.
1	3,155	Maize	Senji fodder, then melons	Maize	Senji fodder, then melons	Maize	Senji fodder	Cane	
2	3,156	Cotton	Wheat	Cane	..	Maize	Senji	Cane	
3	3,157	Cotton	Senji	Cane		Maize	Senji	Cane	
4	3,158	Maize	Senji	Cane	Half fallow; half Melons	Maize	Senji	Cane	
5	3,159	Maize	Senji & tobacco	Chillies	Senji	Maize	Senji	Cane	.
6	3,160	Maize	Senji	Cane		Maize	Senji	Cane	
7	3,161	Maize	Senji	Cane	Half fallow; half Melons	Maize	Senji	Cane	
8	3,162	Maize	Senji	Cane		Maize	Senji	Cane	.
9	3,163	Maize	Senji	Cane	.	Maize	Senji	Cane	
10	3,164	Maize	Senji	Cane		Maize	Senji	Cane	
11	3,165	Maize	Senji	Cane	.	Maize	Senji	Cane	
12	3,166	Maize	Senji	Cane	.	Maize	Senji	Cane	
13	3,167	Maize	Senji	Cane		Maize	Senji	Cane	.
14	3,168	Maize	Senji	Cane		Maize	Senji	Cane	..
15	3,169	Maize	Senji	Cane	Melons	Maize	Senji	Cane	..
16	3,170	Maize	Senji	Cane		Maize	Senji	Cane	.
17	3,171	Maize	Senji	Cane	.	Maize	Senji	Cane	
18	3,172	Maize	Senji	Cane		Maize	Senji	Cane	.
19	3,173	.	Wheat		Wheat	..	Wheat	Cane	..
20	3,354	Maize	Senji & melons	Cotton	Senji	Cane	.	..	Wheat
21	3,355	.	Wheat		Wheat	Maize	Senji	San	Wheat
22	3,356	Cane	..	Maize	Senji	Maize	Senji	Chillies	Senji
23	3,358	Chari fodder	..	Chari fodder	.	Chari fodder	..	Chari fodder	..
24	3,363	..	Wheat		Wheat	Cotton	Barley	San & Chari	Barley
25	3,364	.	Wheat	Maize	Senji, then melons.	Maize	Senji	Maize	Senji

II.
App.
B.

APPENDIX B.—(continued).

TABLE XV. B.—Statement showing the Rotation of Crops on 25 Barani Fields in Tehong during the last eight Harvests, Kharif 1921 to Rabi 1925.

II
App.
B.

Serial No	Khasra No.	HARVESTS.							
		Kharif 1921.	Rabi 1922	Kharif 1922	Rabi 1923.	Kharif 1923	Rabi 1924	Kharif 1924.	Rabi 1925.
1	1,023		Wheat		Wheat		Wheat		Wheat
2	1,024		Wheat		Wheat		Wheat		Wheat
3	1,025		Wheat		Wheat		Wheat		Wheat
4	1,026		Wheat		Wheat		Wheat		Wheat
5	1,027		Wheat		Wheat		Wheat		Wheat
6	1,028		Wheat		Wheat		Wheat		Wheat
7	1,029		Wheat		Wheat		Wheat		Wheat
8	1,030		Wheat		Wheat		Wheat		Wheat
9	1,031		Wheat		Wheat		Wheat		Wheat
10	1,032		Wheat		Wheat		Wheat		Wheat
11	1,033		Wheat		Wheat		Wheat		Wheat
12	1,034		Wheat		Wheat		Wheat		Wheat
13	1,035		Wheat		Wheat		Wheat		Wheat
14	1,036		Wheat		Wheat		Wheat		Wheat
15	1,037		Wheat	..	Wheat		Wheat		Wheat
16	1,038	.	Wheat		Wheat		Wheat	.	Wheat
17	1,039	.	Wheat		Wheat	.	Wheat	.	Wheat
18	1,040		Wheat		Wheat	..	Wheat	..	Wheat
19	1,041	..	Wheat	..	Wheat	..	Wheat		Wheat
20	1,042	.	Wheat	..	Wheat	..	Wheat		Wheat
21	1,043		Wheat	.	Wheat	..	Wheat		Wheat
22	1,044	..	Wheat	..	Wheat	..	Wheat	..	Wheat
23	1,045	.	Wheat		Wheat	..	Wheat	.	Wheat
24	1,046	..	Wheat	.	Wheat	..	Wheat	..	Wheat
25	1,047	.	Wheat	..	Wheat	..	Wheat	..	Wheat

CHAPTER III.

IRRIGATION.

1-4. As there are no canals in the District, and artificial irrigation is done from wells, questions 1 to 4 of the Questionnaire do not arise; also question 8. III.
1-4,
8.

5. Most of the wells are owned jointly, and the share of ownership is closely related to the land owned around the well. The turns for working the wells by the co-sharers are decided by lot in the following manner. An independent person is asked to enclose within a sheet or his folded hands as many pieces of thin sticks of different lengths as there are co-sharers. Then each co-sharer pulls out one piece. The man with the longest piece has the first right to work the well and then the others follow in accordance with the length of their sticks. This helps to insure a fair distribution of water. A cultivator who does not require water when his turn comes round does not sell it to others; the man whose turn is next to his uses the water. III. 5.

6. In the year 1883 there were 41 wells, all made of bricks and capable of use. In 1905 the number of wells was 85, of which 84 were brick lined and one was *kachcha* workable by a *dhenqli*, and all were in use. 1923-24 the number was 99; all except one were in use, and all were brick lined. III. 6.

7. The wells are worked throughout the year as the need for water arises. They are used to moisten the soil before sowing, to irrigate the crop whenever shortage of rainfall requires this, and to bring the crop to a successful harvest. A cultivator uses only two yoke of such cattle as he may possess for working the well. Sometimes he has only one pair and if he has three oxen, he will interchange. Where the well is worked by *charsa* (leathern bucket), he may employ two yoke at a time. Wells fitted with Persian wheels can only utilise one yoke at a time, and extra cattle are used for relief purposes. The area watered in a day varies. On the *Dhaha* (upland) one yoke may water three or four *kanals*, while in the *Bet* where the water level is nearer the surface, five to six *kanals* may be watered by one yoke. The efficiency of the wells depends on the amount of water available, which in some cases has been increased by sinking a tube at the bottom of the well. III. 7.

III. 7. To come to individual cases, U.S. has a well in the *Bet* with a wheel and bucket (*charsa*). He uses four oxen and limits his irrigation to his land in the immediate vicinity of the well. With his four oxen he can irrigate as much as ten to twelve *kanals* (about an acre) a day, using the oxen in pairs, alternately. The actual work done depends upon the needs of the time; in case of urgency he may even have to work for four days at a stretch. The depth of water in the well is $7\frac{1}{2}$ feet and there is an iron tube sunk in it, so that the well can be worked throughout the twenty-four hours; observation disclosed that the two pairs of oxen working alternately could irrigate three *kanals* in 3 hours 42 minutes, excluding stoppages. This is at the rate of 19 *kanals* 9 *marlas* or 1.83 acres a day.

K. has a well in the *Dhaha* with two yoke of oxen; these can water six to eight *kanals* a day. Working alternately the two yoke can irrigate about 31 *marlas* in $2\frac{1}{2}$ hours with the bucket (*charsa*). It is a new well with a depth of water of 18 feet and can be worked for the full 24 hours.

R. has three cattle to his well, so that one rests while two work. The depth of water is only $4\frac{1}{2}$ feet and although a tube was sunk one hundred feet, the lower sub-stratum of water was not touched. This necessitates stoppages so that only 2 to $2\frac{1}{2}$ *kanals* (roughly $\frac{1}{7}$ to $\frac{1}{4}$ of an acre) a day can be watered. One *kanal* was irrigated in about $1\frac{2}{3}$ hours after which the work had to be stopped to allow the water to accumulate. The well has the wheel and bucket (*charsa*).

C. S. has two yoke of cattle, which alternately work his bucket in the *Dhaha*. The cattle are weak and the outturn of work is comparatively small. Ordinarily they irrigate four to five *kanals* of land in a day (24 hours); excluding stoppages, they irrigated about 37 *marlas* in three hours. The depth of the water in the well is 18 feet and it can be worked for the full 24 hours.

K. keeps three cattle. He puts one yoke to work his bucket in the *Bet* and the third ox is used as a relief. He ordinarily irrigates from seven to nine *kanals* of land a day. The water of the well is 15 feet deep, and can be worked for all the 24 hours. K.'s three cattle working as above irrigated $3\frac{1}{2}$ *kanals* of land in about five hours.

In order to find out what area the well can irrigate in 24 hours on the assumption that the cattle power is sufficient to work the well the whole of that time observations were made and it was noticed that the cattle

while fresh, irrigated 32 *marlas* in 2 hours, so in 24 hours the well could III. 7.
irrigate about 19 *kanals* 4 *marlas* or 1.81 acres.

In many cases, however, the wells are divided into shares ; in one well there are eleven cultivating families holding shares, and these have twenty yoke of oxen. The share in the well is usually closely related to the area around the well owned by the sharers, and the time during which each may use the well is dependent on his share. The cultivators who own shares in different wells have to go from one to the other as they have land to be irrigated around each well. As has been said earlier each yoke of cattle irrigates three to four *kanals* of *Dhaha* land and five to six *kanals* of *Bet* land in a day.

Takiawala well is divided among 11 cultivating families each with different shares in the well, and owning in all 20 yoke of cattle. N., son of H., worked the well with two yoke of oxen and irrigated with the *charsa* two pieces of land (growing *senji*) with an area of $1\frac{1}{2}$ *kanals* in $2\frac{1}{2}$ hours. The water of the well is only 6 feet deep and there was no iron tube sunk in this well. The well after irrigating three *kanals* of land, could not fill the *charsa* and the cultivator had then to wait and work at intervals as the water accumulated. In this way the well was able to irrigate only five *kanals* of land in a day of 24 hours. In the cases in which the irrigating capacity of wells is low and the water runs short in the course of watering, the cultivators generally do no productive work while waiting for the accumulation of water but spend the time resting and smoking the *hukka*.

9. No cultivator here cultivates a purely well-holding or a purely III. 9.
barani holding. Each cultivator's holding is partly *chahi* and partly *barani*. *Baram* areas are cultivated to grow *chari* fodder crop, wheat or wheat and gram ; the other chief crops such as maize, cotton, sugarcane or even *senji* fodder and vegetables are only grown on well-irrigated lands.

CHAPTER IV.

HOLDINGS.

IV. 1. 1. According to the *Jamabandi* records of 1924-25, the total cultivated area of the village was 2,161 acres, and the number of owners—each owner being counted only once—was 734. Thus the cultivated area per owner is 2·94 acres. In 1899-1900 the total cultivated area was 2,181 acres and the number of owners 671, *i.e.*, a cultivated area per owner of 3·25 acres.

IV. 2 2. Excluding squares held in the Canal Colonies, the owners of this village own 668 acres of cultivated land outside the village. Taking this into consideration, the cultivated area per owner rises to 3·85 acres. Out of the total of 734 owners, 281 do not cultivate.

IV. 3. 3. The following statement shows the number of proprietary holdings owned :—

TABLE XVI.—*Showing the No. of Proprietary Holdings Owned in Trehong.*

(a).	by a single owner	..	..	258
(b).	„ 2 persons jointly	..	..	153
(c).	„ 3 „ „	..	..	94
(d).	„ 4 „ „	..	..	54
(e).	„ 5 „ „	..	..	23
(f).	„ more than 5 persons jointly	..		76

NOTE.—In the above statement the same person may be counted more than once, *e.g.*, if he owns land as a single owner and other land jointly with others, he would appear under both entries

IV. 4. 4. The following statement classifies owners according to the area they possess. In the last column the effect of taking into account cultivated area owned outside the village is shown; only those resident in the village have been considered.

TABLE XVII.—*Classifying Owners according to the Area they Possess.*

IV. 4.

No of Owners who own—	Total	Outsiders	Of this village.	If cultivated area outside the village is taken into account.
(a). less than 1 acre cultivated land ..	216	47	169	167
Between—				
(b). 1 and $2\frac{1}{2}$ acres cultivated land	239	55	184	181
(c). $2\frac{1}{2}$ „ 5 „ „ „ ..	166	14	152	144
(d). 5 „ $7\frac{1}{2}$ „ „ „ ..	69	7	62	75
(e). $7\frac{1}{2}$ „ 10 „ „ „ ..	25	2	23	20
(f). 10 „ 15 „ „ „ ..	13	1	12	11
(g). 15 „ 20 „ „ „ ..	3	2	1	3
(h). 20 „ 50 „ „ „ ..	3	1	2	2
(i). more than 50 acres „ „ ..	..	.	..	2
<i>Total</i> ..	<i>734</i>	<i>129</i>	<i>605</i>	<i>605</i>

Of the 169 owners of this village who own less than 1 acre of cultivated land, 161 are *Arains* by caste. Of these, 15 are casual labourers in the village, 63 are in the Canal Colonies—(33 cultivate as tenants, 27 own and cultivate squares, 1 is a goldsmith and the remaining 2 are agricultural labourers); 38 cultivate in the village renting further land as tenants, 5 cultivate outside where they own land, 6 cultivate as tenants in neighbouring villages, 15 (of whom one is a moneylender and also acts as *chaukidar*) are in service of one kind or another, 1 is working in Australia, 4 are too old to do anything, (one of them has since died), 2 are women, 11 (four of whom earn a little by casual labour) are minors, and 1 is untraceable. Of the remaining 8 owners, 4 (one *mirasi* and three *hajjam* by caste) are working as *kamins* in the village, 2 (*hajjam* by caste) are working as *kamins* in a Canal Colony, and two live on charity—one a Mohammedan, the holder of a *sonji*, and one a *majawar*, the caretaker of the graveyard.

IV. 5. 5. The following statement shows the number of owners who cultivate.

TABLE XXVIII.—*Classifying Owners according to the Area they Cultivate in Tehong.*

Owners who cultivate—	No.	Acres owned.	Acres rented.
(a). less than 1 acre—			
i residents of this village ..	156	63 275	4 025
ii residents of other villages ..	41	17·925	1·643
(b). between 1 and 2½ acres—			
i residents of this village ..	46	59 656	20·400
ii residents of other villages ..	25	30·244	8 000
(c). between 2½ and 5 acres—			
i residents of this village ..	49	132 594	91·031
ii residents of other villages ..	17	39 469	20 800
(d). between 5 and 7½ acres—			
i residents of this village ..	53	192 519	143·856
ii residents of other villages ..	3	8·062	10 581
(e) between 7½ and 10 acres—			
i residents of this village ..	48	194 112	234 599
ii residents of other villages ..	..	..	.
(f). between 10 and 15 acres—			
i all of this village ..	41	221 981	272 400
(g). between 15 and 20 acres—			
i. all of this village ..	10	44·387	122·406
(h). between 20 and 50 acres—			
i. all of this village ..	5	57·294	49·512
(i). over 50 acres ..	..	..	..

6. The following statements classify the occupation of owners in IV 6. the different categories specified in paragraph 4 of this chapter.

TABLE XIX — *Statements giving Details of Occupations of Owners in Tehong according to the Area they Possess.*

(a). *Owners who own less than 1 acre of cultivated land :—*

Total Number=169.

<i>Owners.</i>	<i>Number.</i>	<i>Remarks.</i>
i. who cultivate in the village taking additional land on rent ..	38	
ii. who cultivate elsewhere as owners or tenants	71	
iii. who neither cultivate, nor have other means of livelihood ..	14	<div style="display: inline-block; vertical-align: middle;"> <div style="display: inline-block; vertical-align: middle;"> <div style="display: inline-block; vertical-align: middle;">{</div> <div style="display: inline-block; vertical-align: middle;"> Old men 4 Minors 7 Women 2 Untraceable 1 </div> </div> </div>
iv. who do not cultivate, but have other means of livelihood—		
(a). as labourers	23	<div style="display: inline-block; vertical-align: middle;"> <div style="display: inline-block; vertical-align: middle;">{</div> <div style="display: inline-block; vertical-align: middle;"> Two in a Canal Colony, 21 as casual labourers in Phil- lour, etc. </div> </div>
(b). at work in Australia ..	1	
(c). in service	15	<div style="display: inline-block; vertical-align: middle;"> <div style="display: inline-block; vertical-align: middle;">{</div> <div style="display: inline-block; vertical-align: middle;"> Two are village <i>chaukidars</i>; one also is a money-lender. </div> </div>
(d). as <i>kamans</i>	6	Two in a Canal Colony.
(e). as artisans	1	Goldsmith in a Canal Colony.

(b). *Owners who own between 1 and 2½ acres of cultivated land :—*

Total Number=184.

<i>Owners.</i>	<i>Number.</i>	<i>Remarks.</i>
i. who cultivate in the village ..	66	
ii. who cultivate elsewhere as owners or tenants	38	
iii. who neither cultivate, nor have other means of livelihood ..	17	<div style="display: inline-block; vertical-align: middle;"> <div style="display: inline-block; vertical-align: middle;">{</div> <div style="display: inline-block; vertical-align: middle;"> Old men 6 Minors 8 Women 3 </div> </div>
iv. who do not cultivate, but have other means of livelihood—		
(a). as labourers	38	
(b). „ traders and money-lenders	4	
(c). „ traders in cattle ..	3	
(d). at work in Australia ..	1	
(e). as a <i>Qaz</i>	1	in another village.
(f). „ petition-writers ..	2	
(g). in service	14	

IV. 6 (c). Owners who own between $2\frac{1}{2}$ and 5 acres of cultivated land.

Total Number=152

Owners.	Number	Remarks.						
i. who cultivate in the village ..	60	Nine of these at times ply carts for hire.						
ii. who cultivate elsewhere as owners or tenants ..	9							
iii. who neither cultivate, nor have other means of livelihood ..	34	<table><tr><td>Old men ..</td><td>16</td></tr><tr><td>Minors ..</td><td>7</td></tr><tr><td>Women ..</td><td>11</td></tr></table>	Old men ..	16	Minors ..	7	Women ..	11
Old men ..	16							
Minors ..	7							
Women ..	11							
iv. who do not cultivate, but have other means of livelihood—								
(a). as labourers ..	29							
(b). „ money-lenders ..	11							
(c) „, cattle traders ..	3							
(d). at work in Australia ..	1							
(e). in service ..	4							
(f). by plying a bullock cart for hire ..	1							

(d). Owners who own between 5 and $7\frac{1}{2}$ acres of cultivated land.

Total Number=62

<i>Owners.</i>	<i>Number.</i>	<i>Remarks.</i>						
i. who cultivate in the village ..	29	Two of these at times ply carts for hire.						
ii. who cultivate elsewhere as owners or tenants	7							
iii. who neither cultivate, nor have other means of livelihood ..	11	<table> <tr> <td>Old men ..</td> <td>3</td> </tr> <tr> <td>Minors ..</td> <td>1</td> </tr> <tr> <td>Women ..</td> <td>7</td> </tr> </table>	Old men ..	3	Minors ..	1	Women ..	7
Old men ..	3							
Minors ..	1							
Women ..	7							
iv. who do not cultivate, but have other means of livelihood—								
(a) as labourers	10							
(b). „, cattle traders ..	3							
“ „ „ ..	2							

(e). *Owners who own between 7½ and 10 acres of cultivated land.*

IV 6.

Total Number=23

<i>Owners.</i>	<i>Number.</i>	<i>Remarks.</i>						
i. who cultivate in the village ..	13	One of these at times plies a cart for hire.						
ii. who cultivate elsewhere as owners or tenants						
iii. who neither cultivate, nor have other means of livelihood ..	4	<table><tr><td>Old men ..</td><td>2</td></tr><tr><td>Minor ..</td><td>1</td></tr><tr><td>Woman ..</td><td>1</td></tr></table>	Old men ..	2	Minor ..	1	Woman ..	1
Old men ..	2							
Minor ..	1							
Woman ..	1							
iv. who do not cultivate, but have other means of livelihood--								
(a). as labourer ..	1							
(b). , traders and money-lenders	3							
(c). in service ..	2							

(f). *Owners who own between 10 and 15 acres of cultivated land.*

Total Number=12

<i>Owners.</i>	<i>Number.</i>	<i>Remarks.</i>
i. who cultivate in the village ..	3	One of these lends money and also runs a corn-grinding mill.
ii. who cultivate elsewhere as owners or tenants ..	3	
iii. who neither cultivate, nor have other means of livelihood ..	..
iv. who do not cultivate, but have other means of livelihood—		
(a). as money-lenders ..	1	
(b). , <i>Bhaji</i> (Sikh religious leader)	1	Is a <i>sonjidar</i> .
(c). from land elsewhere ..	4	

IV. 6. (g). Owners who own between 15 and 20 acres of cultivated land.

Total Number=1

<i>Owners.</i>	<i>Number.</i>	<i>Remarks.</i>
i. who cultivate in the village ..	1	Has no other source of income.

(h). Owners who own between 20 and 50 acres of cultivated land

Total Number=2

<i>Owners.</i>	<i>Number.</i>	<i>Remarks.</i>
i. who cultivate in the village ..	1	Has also income from land elsewhere.
ii. who cultivate elsewhere as owners or tenants ..	..	..
iii. who neither cultivate, nor have other means of livelihood ..	..	..
iv. who do not cultivate, but have other means of livelihood—		
(a). in service ..	1	Has also income from land elsewhere.

IV. 7. 7. The total number of owners is 734, but 129 of these belong to other villages. Of the remaining 605 who belong to Tehong, 425 are resident and of these 211 actually cultivate. 80 neither cultivate, nor have other means of livelihood; they are :—Old men, 31; minors, 24; women, 24; untraceable, 1. The remaining 134 resident owners who do not cultivate are engaged as follows :—99 reside in the village and depend on casual labour in Phillour and elsewhere; 2 are *chaukidars*, one of whom also carries on money-lending; 4 are *kamins*; 19 are money-lenders and traders; 1 is a *Bhauji* (a religious leader of the Sikhs); 9 keep cattle and try to make a profit as cattle dealers.

IV. 8. 8. As stated above, the number of non-resident owners is 180—(excluding the 129 who belong to other villages). Of these 180, 128 cultivate elsewhere as owners or tenants; 6 are agricultural labourers in the Canal Colonies; 3 are *kamins* and have resided in the Canal

Colonies for years; 1 is working as a goldsmith in the Montgomery District; 3 are in foreign lands; 1 is a *Qazi* in a village some six miles from Tehong, 2 are petition-writers, and 36 are in service. Information collected as regards those in service shows them to be employed as follows:—

In Government Service.

(a).	On salary of Rs. 15/- to Rs. 20/- p.m.	..	17	{ 1 a <i>zaildar</i> . 1 a police constable. 15 in railway service.
(b).	„ „ Rs. 30/- p.m.	.	4	{ 1 a <i>patwari</i> in a Canal Colony. 3 in railway service.
(c).	„ „ Rs. 60/- „	..	2	in railway service.

In Other Service.

(a).	On salary of Rs. 10/- p.m.	..	6	<i>Chaukidars</i> .
(b).	„ „ Rs. 15/- p.m.	..	2	{ 1 a cook. 1 a <i>chaukidar</i> in a Canal Colony.
(c).	„ „ Rs. 35/- to Rs. 40/-p.m.	..	3	{ 2 petition writers. 1 an agent to a pleader
(d).	„ „ Rs. 100/- p.m.	..	1	A clerk with a firm.
(e).	„ „ Rs. 150/- p.m.	..	1	A clerk with the Persian Oil Company.

9. The following statement shows the number of holdings cultivated— IV.9.

TABLE XX.—*Showing the No. of Cultivating Holdings in Tehong.*

Cultivated by—				Number.
(a).	a single cultivator	..	..	.. 204
(b).	2 cultivators jointly	..	..	.. 93
(c).	3 „ „	..	..	.. 67
(d).	4 „ „	..	..	.. 57
(e).	5 „ „	..	..	.. 29
(f).	more than 5 „	..	..	.. 169

10. The statement given below shows the number of cultivators grouped according to the area they cultivate; the figures in the first IV.10.

IV. 10 column (a) show those who cultivate in the village, and in the second column (b) those who cultivate in the village and outside.

TABLE XXI.—*Showing the No. of Cultivators grouped according to the Area they Cultivate.*

Cultivators who cultivate—				(a).	(b).
(a).	2½ acres or less	..	..	227	226
(b).	between 2½ and 5 acres	..	..	51	50
(c).	„ 5 „ 7½ „	..	..	53	53
(d).	„ 7½ „ 10 „	..	..	52	50
(e).	„ 10 „ 15 „	..	..	38	41
(f).	„ 15 „ 20 „	..	..	12	13
(g).	„ 20 „ 50 acres	..	..	5	5
(h).	More than 50 acres	..	..	..	..

In the above statement, cultivating owners and tenants, whether owners or not, are included.

IV. 11. 11 (i). There are only two occupancy tenants and they do not cultivate.

(ii). Owners who also cultivate as tenants-at-will number 147. Non-owner tenants-at-will under owners or occupancy tenants number, according to *jamibandi* and *khasra gardawari* records, 25, but 23 of these really ought not to be reckoned as actual cultivators. They only grow fodder crops such as *chari* by paying four annas per *kanal* for ploughing once. *Chari* fodder crops require little subsequent attention after sowing, so these people in order to avoid the necessity of purchasing fodder grow it in this way for their cattle.

With regard to the occupations of these 23 non-owner tenants-at-will, 6 are *tarkhans* (carpenters), 2 *lohars* (blacksmiths), 2 shopkeepers (Brahman by caste), 7 *jhwars* (water-carriers), 3 *hajjams*, and 3 vegetablesellers (*mochi* by caste). Each of them grows less than one acre of fodder crop. Their number varies each year. Of the remaining two, only one actually cultivates as tenant at-will and resides permanently in the village; the other has left for an Indian State where he has acquired a square of land.

(iii). In addition to the above owners who are also tenants-at-will, there are six owners who are sub-tenants under tenants-at-will. There are further, three tenants-at-will who are also sub-tenants of tenants-at-will, two being actual cultivators and non-owners. These two are permanently resident in the village and have been cultivating one plot or another as sub-tenants of tenants-at-will for the past ten years. They have never cultivated the same plot as sub-tenants for more than three years without

a break. It should be explained that a cultivating sub-tenant is one who follows cultivation as his main occupation and the land he cultivates has been let to him by a tenant-at-will. There are two who are sub-tenants under tenants-at-will, but they are not actual cultivators. IV. 11

12. Of the one non-owner tenant-at-will and the two sub-tenants under tenants-at-will shown above as cultivators, one is a *foqir* (beggar) by caste, and two are *Arains*. The *foqir* tenant has supplementary means of livelihood peculiar to his caste. Of the two *Arains*, one is known as *gaddawala* and plies a cart for hire. The other *Arain* tenant, who was an owner a year ago, is now cultivating as a tenant-at-will and is a permanent resident in the village. He keeps an ox and a male buffalo as his plough cattle. The buffalo is a very healthy animal and is used for stud purposes. The owner charges the people one rupee per service. He earns Rs. 100/- to 120/- annually in this way. IV. 12.

13. Statements are given below showing the fragmentation of proprietary and cultivating holdings. "Plot" is used to denote a continuous piece of land held by the same owner or cultivator and may include several field numbers. For this statement and the following, the holdings of only *Patti Hassan Chakian* have been examined. IV. 13.

TABLE XXII.—Statement showing the Fragmentation of Proprietary and Cultivating Holdings in *Patti Hassan Chakian*.

Number of Plots.	FRAGMENTATION IN PATTI HASSAN CHAKIAN OF—			
	Proprietary Holdings		Cultivation	
	Number of holdings with specified No of plots	Per cent of the total	Number of cultivators with specified No of plots	Per cent. of the total
1 plot	33	29.2	29	27.6
2 to 5 plots	28	24.8	25	23.8
6 „ 10 „	10	8.8	10	9.5
11 „ 15 „	4	3.5	5	4.7
16 „ 20 „	4	3.5	3	2.8
21 „ 25 „	8	7.0	6	5.7
26 „ 30 „	7	6.2	4	3.8
31 „ 40 „	14	12.4	10	9.5
41 „ 50 „	3	2.6	6	5.7
51 „ 60 „	2	1.7	5	4.7
over 60 „	..	..	2	1.9

TABLE XXIII—Statement showing Fragmentation of Proprietary Holdings
in Patti Hassan Chakian.

IV. 13

Holdings of—	No of holdings with specified No. of plots	Average area of a holding	Largest holding	Smallest holding	Largest plot	Smallest plot.	Remarks
		Acres.	Acres.	Acres.	Acres.	Acres.	
1 plot ..	76	230	·213	·005	·213	·005	
2 plots ..	30	845	·006	·131	1·706	·009	
3 „ ..	22	·328	·559	·075	375	·005	
4 „ ..	24	·352	·491	·394	·141	·005	
5 „ ..	6	·952	1·105	·836	784	·009	
6 „ ..	4	·817	1 203	·625	484	·005	
8 „ ..	1	1 106	1·306	1·306	·541	·014	
9 „ ..	2	1·753	1 987	1 519	·709	·028	
10 „ ..	6	1·203	1 363	1 009	·314	·009	
13 „ ..	6	2 773	2·773	2·773	·747	·023	Joint Holding
14 „ ..	3	10 808	16 633	4·988	3 611	·052	
15 „ ..	6	10·338	10 338	10 338	238	·098	Joint Holding
16 „ ..	3	6 642	6 642	6 642	1·198	·098	„
17 „ ..	6	3 281	3 281	3 281	588	·056	„
18 „ ..	9	4·941	6·958	2·828	2·139	·038	
22 „ ..	26	5·032	6 097	4·442	·104	·005	
24 „ ..	4	8·519	10·616	6 855	1·245	·024	
25 „ ..	1	4·335	4 335	4·335	·441	·047	
26 „ ..	8	4 557	4 739	4 381	·658	·009	
27 „ ..	7	4·198	4 198	4 198	·394	·033	Joint Holding
28 „ ..	11	5·533	6 804	4·198	1 128	·012	
29 „ ..	3	10 188	10·188	10 188	825	·042	Joint Holding
30 „ ..	1	17·766	17·766	17·766	3 211	·128	
31 „ ..	3	6 394	6 394	6·394	·672	·033	Joint Holding
32 „ ..	14	4 074	4·074	4·074	·531	·023	„
33 „ ..	5	11·648	11·648	11 648	1·114	·063	„
34 „ ..	2	5 987	5 998	5 975	·464	·023	
35 „ ..	10	11 094	12·195	9 952	1·542	·042	
36 „ ..	10	12·472	14·998	9·952	1 114	·005	
37 „ ..	2	11·645	11·645	11 645	1 127	·019	Joint Holding
38 „ ..	3	13 647	13 647	13·647	1 128	·314	„
39 „ ..	7	8·192	11 527	5·654	1 170	·014	
42 „ ..	11	8·947	12·139	6·698	·972	·028	
43 „ ..	3	12 148	12·148	12·148	1·009	·038	Joint Holding
55 „ ..	4	13·216	13·216	13·216	827	·023	„
60 „ ..	3	8·852	8·852	8·570	·464	·005	„

14 A map is given at the end of the Chapter showing the fragmentation of land in the case of ten proprietary holdings. Customs ordaining the division of plots of each quality of land between the heirs have intensified the fragmentation arising from other causes such as irregular expansion of cultivation in the waste, and haphazard sales and purchases of small plots. That fragmentation is now excessive will be clear from the map and the conditions illustrated may be taken as typical of the area. It will be seen that in the ten cases reproduced, fragmentation ranges from 4 to 60 pieces distributed all over the village land. Unfortunately owing to incomplete data, it has not been possible to reproduce a map showing also the fragmentation of cultivation. IV. 14

15. The history of three proprietary holdings was traced through the old records to show how fragmentation has crept in. IV. 15.

CASE No. I., HOLDING No. 536.

In the year 1848-49 this holding, then Serial No 121, was jointly owned by three sons of one, B. The area was 315 *kanals* in 48 pieces. No actual records of partitioning are available, but in 1881 we find K. B, a son of B. owning his share in three holdings, viz., 384, 385 and 388. The area is 105 *kanals* 5 *marlas* and the pieces 45 in number. In 1881-85 at the time of Settlement, these three holdings of K. B. were regarded as one and given the Serial No. 359. Sometime after this K. B. died and his sons U. and A. became joint owners of the holding. They purchased 12 *kanals* 5 *marlas* in seven pieces and further split one of their pieces into two for cultivation, thus possessing an area of 117 *kanals* 10 *marlas* in 53 pieces. In the *jama-bandi* year 1898-99, their holding was given Serial No. 457. Soon afterwards U. died and his two sons E. and S. became joint owners with their uncle A.

In 1907-08 the holding was given a new Serial No. 444. The area was the same, but the fragments had increased to 59, six having been split into twice that number for cultivation. Later on the owners exchanged four pieces for four others and in the transaction got 10 *marlas* extra. Further they acquired 7 *kanals* 5 *marlas* in four pieces on the partitioning of some *shamilat* (common land). In 1911-12, therefore, their holding was 125 *kanals* 5 *marlas* in 63 pieces. After this they got one more piece of 2 *kanals* 16 *marlas* on another partitioning of common land.

In the Settlement year 1915-16, the area of their holding was 128 *kanals* 1 *marla* and has remained so up-to-date, but in that year the fragments

IV. 15. totalled 62 as four of the split pieces had again been amalgamated into two pieces. In 1919-20, however, one of these pieces was re-split into two, and later the same thing happened to another piece, thus giving a total of 64 pieces. In 1925 the holding was given the Serial No. 536. Its area is 128 *kanals* 1 *marla* in 64 pieces Half is owned by E. and S. and half by M., their cousin, son of A. who died some time ago.

CASE No. II., HOLDING No. 532.

In 1848-49 one F. was owning Holding No 109 comprising 248 *kanals* in 32 pieces F had five sons and sometime after this, probably on account of his demise, the holding was divided among them in equal shares. Thus in 1881 we find B., one of the sons, owning Holding No. 383 comprising 88 *kanals* 16 *marlas* in 60 pieces. *Jamabandi* records of 1868 having been destroyed exact information is lacking, but it is probable that part of this holding was his share from paternal property and part purchased; personal inquiry from the villagers seemed to bear out this conjecture.

After the Settlement of 1881-85, B. purchased 6 *kanals* 6 *marlas* in four pieces, so in 1891-92 he possessed 95 *kanals* 2 *marlas* in 64 pieces. Shortly after this B. died and his land passed into the joint ownership of his sons H. and S. They exchanged one piece for two but accepted 3 *marlas* less in area. Further twelve pieces were split into halves for cultivation. In 1895-96, therefore, their area was 94 *kanals* 19 *marlas* and the pieces numbered 77. This area remained till 1907-08, but four of the split pieces being again joined into two for purposes of consolidation of cultivation, the number of pieces became 75 Later at a partitioning of the *shamilat* (common land) they acquired 5 *kanals* 3 *marlas* in two pieces. Thus in 1911-12 their area was 100 *kanals* 2 *marlas* but the pieces numbered 71, owing to more consolidation of the split pieces. Later they exchanged an area for another getting two pieces more than what they gave. They also got 2 *kanals* in one piece on another partitioning of the common land, and also split four pieces into halves for cultivation. In 1915-16 they possessed 102 *kanals* 2 *marlas* in 78 pieces. This area remained till 1919, but owing to an exchange of land they had one piece more.

After 1919 S. died and his widow became joint owner with her brother-in-law. They exchanged 8 *kanals* 15 *marlas* in four pieces from *khana malkiat* (land owned) for a right in a similar area in one piece in *khana kash* (land cultivated) in another holding.

Thus in 1923-24 they owned 93 *kanals* 7 *marlas* plus a share in cultivation in the other holding to the extent of 8 *kanals* 15 *marlas*. After the exchange mentioned above they had only 75 pieces left, but they split two pieces into halves and so had 77. IV. 15.

CASE NO. III., HOLDING NO. 511.

In 1848-49 the original Holding No. 102 had an area of 244 *kanals* in 41 pieces. The holding was divided later and in 1881 we find two of the new holdings made up as follows—

A. Serial No. 365 : 36 *kanals* 16 *marlas* in 23 pieces.

B. Serial No. 367 : 80 *kanals* 19 *marlas* in 22 pieces.

The area of these two remained the same till 1907-08, but Holding B. had now 23 pieces, one piece having been split into two. The owner of B. died childless and the ownership of his land went to the four male owners who jointly owned Holding A, and to a widow, a relative of the owner. After 1907-08 the Holdings received an addition on the partitioning of some *shamilat* (common land), Holding A. getting 4 *kanals* 19 *marlas* in two pieces, and B. 4 *kanals* 16 *marlas* also in two pieces. In 1911-12, therefore, A. comprised 41 *kanals* 15 *marlas* in 25 pieces, and B. 85 *kanals* 15 *marlas* in 25 pieces.

Shortly after this the widow died and the sole ownership passed to the owners of Holding A. Further partitioning of *shamilat* gave Holding A. 5 *marlas* in one piece and Holding B. 7 *marlas* in one piece.

In 1915-16 Holdings A. and B. were amalgamated into one Holding No. 442, with an area of 128 *kanals* 2 *marlas* in 48 pieces, the decrease in the number of pieces being due to consolidation of some which had been split. Later the owners exchanged some land piece for piece, but accepted 3 *marlas* less. In 1919-20 the area stood at 127 *kanals* 19 *marlas* in 49 pieces, one piece having been split into two, later this happened again to another piece. There are, therefore, at present 127 *kanals* 19 *marlas* in 50 pieces, but the Serial No. has been changed to 511.

16 Three cases only were available and these were examined to show the effect of partitioning on fragmentation. In the first the partitioning occurs among five parties, in the other two between two parties. It may be added that the reason of the partition, as usual, was, that each party should get good and bad fields in fair and equitable proportion, IV. 16.

CASE No. 1.

14.16. The partition took place in December 1925. The number of fields were eight and the parties were as follows :—A. (5 persons), B. (1 person), C. (2 persons), D. (1 person), and E. (1 person). The area was 106 *kanals* 9 *marlas* and before the partition it was in 67 pieces, but after partitioning had increased to 91. The following are the details of the partitioning.

TABLE XXIV. A.—*Giving details of Partitioning for Case No. 1.*

Party	No. of pieces.	Area		Chahi		Barani.		Banjar Qadim.	
		Ks.	Ms.	Ks.	Ms.	Ks.	Ms.	Ks.	Ms.
A.	20	26	12	12	2	13	19	0	11
B.	16	26	11	12	2	13	18	0	11
C.	22	26	12	12	3	13	18	0	11
D.	17	13	7	6	2	7	0	0	5
E.	16	13	7	6	2	7	0	0	5
Total	91	106	9	48	11	55	15	2	3

CASE No. 2.

The partition of the field took place on 31st March 1924. The parties were A. (1 person) and B. (3 persons). The area was 48 *kanals* 5 *marlas*. Before the partition the field had 30 pieces, but after partitioning only 29, as two pieces were given to the same owner and were made into one to consolidate cultivation. The details are given below.

TABLE XXIV. B.—*Giving details of Partitioning for Case No. 2.*

Party.	No of pieces.	Area.		Chahi.		Barani		Banjar Qadim.	
		Ks.	Ms.	Ks.	Ms.	Ks.	Ms.	Ks.	Ms.
A.	13	24	2	10	17	11	12	1	13
B.	16	24	3	10	0	12	12	1	11
Total	29	48	5	20	17	24	4	3	4

CASE No. 3.

The partition of the field took place on 19th August 1922. The parties IV. 16. were A. (3 persons) and B. (1 person), and the area was 8 *kanals* 10 *marlas*. The pieces remained as before, *viz.*, nine. The details are given below.

TABLE XXIV. C.—*Giving details of Partitioning for Case No. 3*

Party.	No of pieces.	Area		Chahi		Barani	
		Ks.	Ms	Ks	Ms	Ks	Ms.
A.	4	4	7	1	0	3	7
B.	5	4	3	1	13	2	10
<i>Total</i>	9	8	10	2	13	5	17

17. Land in the village is held on the incomplete *bharchara* system. IV. 17. Owners have land in scattered fragments, and as a result there is much waste of time in going for work from one place to another, also much waste of crops by theft or injury as it is impracticable to keep watch over all the plots. The scattering of holdings is also responsible for little effort being made in the direction of improvements.

The continuance of the *barani* area is ascribed by all as due to the existing fragmentation. "Consolidation of holdings will make us sink wells and the *barani* lands will become *chahi*," said N, D, and K. Fragmentation led M and A (small owners) to abandon cultivation and to take up casual labour. It is also mentioned as a cause of indebtedness.

Boundary disputes are very common and lead occasionally to litigation. The "shisham trees case" which occurred about a couple of years ago is well known throughout the *tahsil*. The trees were cut by one party and the adjoining owner claimed them as his. The case became complicated and the accused was several times arrested and then released by the *tahsildar* as his impression of the case varied. The parties concerned spent about Rs 400/- in the suit. Similarly this year litigation has occurred over a claim for a *kikar* tree.

Wells too, are mostly owned in common and quarrels often occur regarding the turns of working them. Sometimes an owner through envy or enmity does not allow a water-course to pass to a field beyond his own and the result is a quarrel and sometimes litigation.

IV 17. Fragmentation in this village has gone so far as to reduce some fields to one *marla* (1/20th of a *kanal*) in area with the result that such plots are not cultivated. A list is given below of 36 of the smallest plots, and the use to which each is put, is also indicated. A field which remains uncultivated continuously for four harvests (two years) is entered in the records as *banjar jadid*, and as *banjar kadim* if it remains so for eight harvests (four years). Only plots of cultivable land have been taken into account: similar plots shown as *johars* (ponds) have been excluded.

TABLE XXV.—*List showing the Smallest Cultivable Plots in Tehong.*

No.	Khasra No.	Use to which put.
1	2810	Wheat in 1925.
2	2811	„
3	1936	„
4	1937	„
5	2066	Vegetables in <i>rabi</i> 1925.
6	2643	<i>Banjar kadim</i> .
7	2697	„
8	2699	„
9	2700	„
10	2730	„
11	2755	„
12	3710	„
13	3821	<i>Chari</i> fodder in <i>kharif</i> 1924, and vacant in <i>rabi</i> 1925.
14	3822	„ „
15	4675	„ „
16	4676	„ „
17	4822	<i>Banjar kadim</i> .
18	7561	„
19	4541	„
20	7537	Wheat in 1925.
21	7272	<i>Banjar kadim</i> .
22	7202	Wheat in 1925.
23	7259	<i>Banjar kadim</i> .
24	10747	„
25	10741	Vacant in <i>kharif</i> 1924 and <i>rabi</i> 1925.
26	10740	„ „
27	10737	<i>Chari</i> fodder 1924, and vacant in 1925.

28	10494	<i>Banjar kadim.</i>
29	10460	„
30	10452	„
31	10420	„
32	6662	„
33	10111	„
34	6310	„
35	9837	„
36	9736	„

To summarise the above—

- 22 plots are *banjar kadim* (old fallow).
- 6 „ are under wheat.
- 5 „ are vacant after growing *chari* in 1924.
- 2 „ grew nothing for the last two harvests.
- 1 plot is under vegetables.

The cultivators were unable to say whether they could and would reduce the number of workers if consolidation were affected.

19. Land here is varied in respect of fertility and favourable position and this is the main impediment in the way of consolidation. The *zemindars*, or at least most of them, have a strong partiality for the fields held by their forefathers, and are loath to give them up in exchange for others. They argue that the original settlers of the village were wise and made a fair distribution of strong and weak lands, which should be retained. IV. 19

The Consolidation Branch of the Co-operative Department tried in the year 1922-23 to effect consolidation, but the scheme met with only a partial success. Those who agreed voluntarily are now blessing the Government; they realise the benefits that even a scheme of partial consolidation may confer. S, etc., sons of M., have built sheds and houses so that they may stay more or less permanently on their partially consolidated farm. Their land presents a rich appearance of thriving crops where nothing is said to have grown previously. They have more time than before to promote the fertility of the soil, and state that injury to crops on the consolidated area from theft is no longer a serious trouble.

The examples of those benefited have been instructive to others. Consolidation is now being demanded and it is suggested that compulsion should be resorted to in the case of those conservative *zemindars* who will not give their consent voluntarily.

CHAPTER V.

EFFECTS OF TENANCY.

V. 1

1. There are only four cultivating tenants, all tenants-at-will, who own no land ; there are only two occupancy tenants, but neither of them cultivates.

For the purpose of comparison, the cultivation of all the four tenants has been carefully studied, and also that of four cultivating owners, one large, one medium and two small owners. The small owners cultivate additional land as tenants, but here only the cultivated holdings owned have been taken into consideration. The description given of the methods of cultivation, number and dates of ploughings, etc , is in respect of *kharif* crops ; it indicates the detailed agricultural history of each crop from the time when the first effort was made towards the preparation of the plot for the particular crop, until 13th September 1925.

CULTIVATION BY OWNERS.

I.—A., *Large Cultivating Owner.*

(a). SUGARCANE.

Area cropped	..	..	11 <i>kanals</i> of <i>Bet</i> land.
Rotation ..	..	..	The cane crop followed <i>senji</i> , which in turn followed maize.

Operation.	Date.	No. of times done in quick succession.
Watering	28th-29th March ..	Twice
Ploughing . ..	3rd April ..	Five
Sowing	4th „ ..	..
Applying <i>sohaga</i> (clod crusher) ..	10th-12th April ..	Thrice

(Continued).

(Concluded).

v. 1.

Operation.	Date.	No. of times done in quick succession.
Applying <i>sohaga</i>	14th April	Once
Watering	22nd "	"
Weeding	25th "	"
Watering	28th "	"
Weeding	2nd-3rd May	Twice
Watering	5th May	Once
"	13th "	"
Weeding	16th "	"
Watering	20th "	"
"	28th "	"
"	5th June	"
Tying canes together	1st September	"
Watering	2nd "	"
"	10th "	"

Summary.

Manure	..	..	..	Nil.
No. of ploughings (excluding sowing)	..	..	..	5
,, waterings	..	..	..	12
,, weedings	..	..	..	4
,, applications of <i>sohaga</i> (clod crusher) with a view to fix moisture in the soil and avoid possible damage to the crop from white ants				4
Precautions taken	..	..	..	Tied canes.

(b). COTTON.

Area cropped	.. 12 <i>kanals</i> of <i>Bet</i> land in two pieces— Plot No. 1, 6½ <i>kanals</i> . ,, ,, 2, 5½ "
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Plot No. 1.

Area cropped	.. 6½ <i>kanals</i> .
Rotation	.. Cotton followed wheat.

V. 1.

Operation.	Date.	No. of times done in quick succession.
Watering	21st April ..	Once
Ploughing	23rd „ ..	„
Sowing	23rd „ ..	„
<i>Chhamb</i> *	26th „ ..	„
Watering	23rd May ..	„
„	3rd September ..	„
„	13th „ ..	„

* Ploughing of the sown plot before the plants shoot out is known as *chhamb*; the operation is said to favour growth.

Summary.

Manure	Nil.
Method of sowing	<i>Chhatta</i> , or scattering broadcast.
No. of ploughings	2 (including <i>chhamb</i> but excluding that at sowing).
„ waterings	4

Plot No. 2.

Area cropped	5½ <i>kanals</i> .
Rotation	Cotton followed sugarcane; in addition melon seed was also scattered.

Operation.	Date.	No. of times done in quick succession.
Scattering of 17 cart-loads of manure	28th March ..	„
Watering	29th „ ..	Once
Ploughing	31st „ ..	Twice
Applying <i>sohaga</i> and making beds	31st „ ..	Once
Watering	31st March-1st April ..	„
Ploughing	5th April ..	Twice
Levelling the soil with <i>sohaga</i> ..	5th „ ..	Once
Sowing mixed seed of cotton and melon, and making beds ..	6th „ ..	„
Weeding and hoeing	21st „ ..	„
Watering	29th „ ..	„

(Continued).

(Concluded).

V. 1.

Operation.	Date.	No. of times done in quick succession.
Weeding and hoeing ..	1st-2nd May ..	Once
Watering ..	12th May ..	"
" ..	22nd " ..	"
" ..	1st June ..	"
Uprooting melon plants to rot on the field ..	24th " ..	"
Watering ..	1st September ..	"
" ..	12th " ..	"

Summary.

Manure ..	.. 17 cart-loads.
Method of sowing ..	.. <i>Chhatta</i> or broadcast.
No. of ploughings ..	.. 4
,, waterings ..	.. 8
,, weedings ..	.. 2

(The owner did not sell the melons ; they were consumed at home).

(c). MAIZE.

Area cropped 8 <i>kanals</i> of <i>Bet</i> land in two pieces— Plot No 1, 4 <i>kanals</i> . ,, ,, 2, 4 ,,
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Plot No. 1.

Area cropped 4 <i>kanals</i> .
Rotation Maize followed wheat.

Operation..	Date.	No. of times done in quick succession.
Carrying 16 cart-loads of manure to field, and distributing in heaps..	21st June ..	..
Scattering of heaped manure ..	7th August ..	..
Ploughing ..	8th " ..	Twice
Sowing by <i>kera</i> method ..	9th " ..	..
Weeding and hoeing ..	18th " ..	Once
Watering ..	29th " ..	"
" ..	9th September ..	"

Summary.

V. 1.	Manure	..	.. 16 cart-loads.
	Method of sowing	..	.. <i>kera</i> , or sowing in the furrow behind the plough.
	No. of ploughings	..	.. 2
	,, waterings	..	.. 2
	,, weedings	..	.. 1

Plot No. 2.

The plot was first intended to be sown with cotton, but later it was decided to grow maize. Hence the reason for manuring twice and beginning operations early.

Area	..	.. 4 <i>kanals</i> .
Rotation	..	.. Maize followed sugarcane.

Operation.	Date.	No of times done in quick succession.
Carting and scattering 13 cart-loads of manure	18th March	..
Watering	19th "	Once
Ploughing	22nd "	Twice
,,	24th "	Once
,,	25th "	"
Stacking in heaps 10 cart-loads of manure	21st June	..
Scattering the manure	6th August	..
Ploughing	7th "	Twice
Sowing by <i>kera</i> method	8th "	..
Weeding and hoeing	18th "	Once
Watering	29th "	"
,,	9th September	"

Summary

Manure	..	.. 23 cart-loads.
Method of sowing	..	.. <i>kera</i> , or sowing in the furrow behind the plough.
No. of ploughings	..	.. 6
,, waterings	..	.. 3
,, weedings	..	.. 1

(d). *Chari* fodder crop was grown on about 96 *kanals* of *barani* land with no ploughing nor other preparation before sowing. The seed was sown by *chhatta* method, and after applying the *sohaga* beds were made to retain rain water. No other effort was made afterwards.

II.—B., *Medium Cultivating Owner.*

V. 1.

(a). SUGARCANE.

Area cropped 3 *kanals* of *Bet* land.

Rotation Cane crop followed maize and
senji fodder.

Operation	Date	No. of times done in quick succession.
Ploughing	14th March	Once
„	16th „	Twice
„	18th „	„
„	20th „	„
Watering	26th „	Once
Ploughing	28th-29th March	Thrice
Sowing	30th March	„
Applying <i>sohaga</i>	3rd April	Twice
„ „	19th „	„
„ „	25th „	Thrice
Watering	27th „	Once
„	13th May	„
Weeding and hoeing	15th „	„
Watering	19th „	„
„	26th „	„
„	11th June	„
„	25th „	„
„	27th August	„
Tying canes together	1st September	„
Watering	7th „	„

Summary.

Manure Nil.

No. of ploughings 8

„ waterings 9

„ applications of *sohaga* .. 7 (excluding operation at
sowing).

„ weedings and hoeings .. 1

Precautions taken .. Tied canes.

(b). COTTON.

V. 1. Area cropped 5 *kanals* of *Dhaha* land.
 Rotation Cotton followed wheat

Operation.	Date.	No. of times done in quick succession.
Watering	21st April ..	Once
Ploughing	23rd „ ..	Twice
Sowing by <i>chhatta</i> method ..	24th „ ..	..
Weeding and hoeing ..	18th August ..	Once
Watering	31st „ ..	„
Weeding	2nd September ..	„
Watering	8th „ ..	„

Summary.

Manure Nil.
 Method of sowing *Chhatta* or broadcast.
 No. of ploughings .. 2
 „ waterings .. 3
 „ weedings and hoeings .. 2

(c). MAIZE.

Area cropped .. 13 *kanals* of *Bet* and in three pieces—
 Plot No. 1, 6 *kanals*.
 „ 2, 2½ „
 „ 3, 4½ „

Plot No. 1.

Area cropped .. 6 *kanals*.
 Rotation Maize was grown after *senji*
 with maize before it.

Operation.	Date.	No. of times done in quick succession.
Carrying 25 cart-loads to field and distributing in heaps ..	19th June ..	..
Scattering of manure ..	3rd August ..	..
Ploughing	4th-5th August ..	Thrice
Sowing and making beds ..	9th August ..	..
Watering	7th September ..	Once

Summary.

Manure	25 cart-loads.	V. 1.
Method of sowing ..	.. <i>kera</i> , or sowing in the furrow behind the plough.	
No. of ploughings ..	3	
„ waterings ..	1	
„ weeding and hoeings ..	<i>Nil</i> .	

Plot No. 2.

Area cropped ..	2½ <i>kanals</i> .
Rotation ..	Maize followed sugarcane.

Operation.	Date.	No. of times done in quick succession
Carrying 9 cart-loads of manure and distributing in heaps ..	20th June ..	..
Scattering of manure ..	5th August ..	..
Ploughing ..	5th-6th „ .	Five
Sowing by <i>kera</i> method ..	9th „ ..	..
Watering ..	7th September ..	Once

Summary.

Manure	9 cart-loads.
Method of sowing ..	.. <i>kera</i> , or sowing in the furrow behind the plough.
No. of ploughings ..	5
„ waterings ..	1
„ weeding ..	<i>Nil</i> .

Plot No. 3.

Area cropped ..	4½ <i>kanals</i> .
Rotation ..	Maize followed sugarcane.

Operation.	Date.	No. of times done in quick succession.
Carrying 20 cart-loads of manure and distributing in heaps ..	20th June ..	..
Scattering of manure ..	5th August ..	..
Ploughing ..	6th-7th August ..	Four
Sowing by <i>kera</i> method ..	10th August ..	..
Re-sowing* ..	19th „ ..	..
Watering ..	11th September ..	Once

* The seed did not grow well, so the plot was resown after rooting out the thin growth of the former seed.

Summary.

V. 1.	Manure	..	..	20 cart-loads.
	Method of sowing	..	..	<i>Kera</i> , or sowing in the furrow behind the plough.
	No of ploughings	..	..	4
	„ waterings	..	..	1
	„ weedings	..	..	<i>Nil</i> .

(d). One *kanal* of melons grown but the produce was consumed at home.

(e). *Chari* fodder was also grown on 28 *kanals*, sown *chhatta*.

III.—C., *Small Cultivating Owner*.

(a). SUGARCANE.

Area cropped	..	..	5 <i>kanals</i> of <i>Dhaha</i> land.
Rotation	..	..	Sugarcane followed <i>senji</i> , with maize before it.

Operation.	Date.	No. of times done in quick succession.
Carting and scattering 5 cart-loads of manure	.. 30th March	..
Watering	.. 1st April	Once
Ploughing	.. 3rd „	Twice
„	.. 4th „	„
Sowing	.. 5th „	..
Applying <i>sohaga</i>	.. 9th „	Twice
„	.. 12th „	„
Hoeing	.. 17th „	Once
Watering	.. 27th „	„
Weeding and hoeing	.. 30th „	„
Beating soil with <i>thapris</i> (wooden implements)	.. 1st May	„
Watering	.. 6th „	„
„	.. 15th „	„
„	.. 23rd „	„
„	.. 1st June	„
„	.. 9th „	„
„	.. 18th „	„
Tying canes	.. 2nd September	„
Watering	.. 6th „	„

Summary.

Manure	..	..	.. 5 cart-loads.	V. 1.
No. of ploughings	..	..	4	
„ applications of <i>sohaga</i>	..	..	4	
„ waterings	..	..	9	
„ beatings with <i>thapris</i>	..	..	1	
„ weedings and hoeings	..	..	2	
Precautions taken			Tied canes.	

(b) The cultivator grew cotton only as a tenant.

(c). MAIZE.

Area cropped . . . 8 *kanals* of *Dhaha* land.

Operation.	Date.	No of times done in quick succession.
Carrying 25 cart-loads of manure and distributing in heaps	.. 18th June ..	..
Scattering of manure	.. 7th August .	..
Ploughing ..	.. 8th „ ..	Once
Sowing by <i>kera</i> method	.. 9th „ ..	..
Weeding and hoeing	. 17th „ ..	Once
„ „ ..	.. 21st „ ..	„
Watering ..	.. 2nd September ..	„
Weeding ..	. 5th „ ..	„

Summary.

Manure	..	..	.. 25 cart-loads.
Method of sowing	..	..	<i>Kera</i> , or sowing in the furrow behind the plough.
No. of ploughings	..	..	1
„ waterings	..	..	1
„ weedings and hoeings	..	..	3

(d) The cultivator grew *chari* fodder only as a tenant.

(e) $2\frac{1}{2}$ *kanals* of melons grown which brought in Rs. 25/-, as well as some for home consumption.

(a). SUGARCANE.

Area cropped .. 6 *kanals* in two pieces—
 Plot No. 1, 4 *kanals* of *Daha* land
 „ „ 2, 2 „ „ *Bet* „

Plot No. 1.

Area cropped 4 *kanals*.
 Rotation Cane followed *chari* fodder crop.

The rotation is unusual and faulty. For successful results the plot ought to have been manured, but the owner was short of manure and this accounts for the particular attention paid to ploughing, hoeing, etc

Operation.	Date.	No. of times done in quick succession.
Ploughing	7th November ..	Twice.
„	15th December ..	„
„	22nd January ..	Once.
„	17th February ..	Thrice.
Watering	1st April ..	Once.
Ploughing	3rd-4th April ..	Thrice.
Sowing	5th April ..	„
Applying <i>sohaga</i> ..	9th „ ..	Twice.
„ „ ..	16th „ ..	Thrice.
Watering	17th „ ..	Once.
„	25th „ ..	„
Weeding and hoeing ..	28th „ ..	„
Beating soil with <i>thapris</i> ..	29th „ ..	„
Watering	2nd May ..	„
Weeding and hoeing ..	5th „ ..	„
Beating soil with <i>thapris</i> ..	6th „ ..	„
Watering	9th „ ..	„
Weeding and hoeing ..	12th „ ..	„
Watering	16th „ ..	„
Weeding and hoeing ..	19th „ ..	„
Watering	21st „ ..	„
„	28th „ ..	„
Weeding and hoeing ..	31st „ ..	„
Watering	3rd June ..	„

Summary.

Manure	Nil.
No. of ploughings	11
„ waterings	9
„ applications of <i>sohaga</i>	5
„ weedings and hoeings	6
„ beatings with <i>thapris</i>	2

V. 1

Plot No. 2.

Area cropped	2 <i>kanals</i> of <i>Bet</i> land
Rotation	Cane followed maize and <i>senji</i> .

Operation.	Date.	No. of times done in quick succession.
Watering	31st March ..	Once.
Ploughing	2nd-3rd April ..	Five.
Sowing	4th April ..	..
Applying <i>sohaga</i>	8th „ ..	Twice.
„ „	13th „ ..	Thrice.
„ „	17th „ ..	„
Watering	18th „ ..	Once
Weeding and hoeing	21st „ ..	„
Beating soil with <i>thapris</i>	„ „ ..	„
Watering	26th „ ..	„
Hoeing	29th „ ..	„
Beating with <i>thapris</i>	„ „ ..	„
Watering	6th May ..	„
Hoeing	9th „ ..	„
Watering	16th „ ..	„
Hoeing	19th „ ..	„
Watering	24th „ ..	„
„	4th June ..	„

Summary.

V. 1.	Manure .. ..	.. Nil.
	No. of ploughings ..	.. 5
	„ waterings ..	.. 7
	„ applications of <i>sohaga</i> ..	.. 8
	„ weedings and hoeings..	.. 4
	„ beating with <i>thapris</i>..	.. 2

(b). Cotton not grown owing to lack of land available on cash rents.

(c). MAIZE.

Area cropped 8 *kanals* in two pieces :—

Plot No. 1, 4 *kanals* of *Dhaha* land.

„ „ 2, 4 „ „ *Bet* „

Plot No. 1.

Area cropped 4 *kanals* of *Dhaha* land.

Rotation Maize followed wheat.

Operation.	Date.	No. of times done in quick succession.
Carting and scattering 8 cart-loads of manure ..	8th June	..
Ploughing	„ „	Twice.
„	7th-8th August ..	„
Sowing by <i>kerā</i> method ..	9th „ ..	..
Weeding and hoeing ..	18th „ ..	Once.
Watering	8th September ..	„

Summary.

Manure	..	..	.. 8 cart-loads.	V. 1.
Method of sowing	..	..	.. <i>Kera</i> , or sowing in the furrow behind the plough.	
No. of ploughings	..	..	.. 4	
„ watering	..	..	.. 1	
„ weeding and hoeings	..	..	.. 1	

Plot No. 2.

Area cropped	..	..	.. 4 <i>kanals</i> of <i>Bet</i> land.
Rotation	..	..	.. Maize followed sugarcane.

Operation.	Date.	No of times done in quick succession.
Carting and scattering 15 cart-loads of manure	..	..
Ploughing	7th, 9th June	Twice.
„	9th June	„
„	6th-7th August	„
Sowing by <i>kera</i> method	8th August	..
Weeding and hoeing	18th „	Once.
Watering	5th September	„
„	13th „	„

Summary.

Manure	..	..	.. 15 cart-loads.
Method of sowing	..	..	.. <i>Kera</i> , or sowing in the furrow behind the plough.
No. of ploughings	..	..	.. 4
„ waterings	..	..	.. 2
„ weeding and hoeing	..	..	.. 1

(d). *Chari* fodder crop grown by *chhatta* method on 4 *kanals* of *barani* land.

V.—E., *Tenant Cultivator.*

(a). SUGARCANE.

Area cropped	..	.. 3 <i>kanals</i> of <i>Bet</i> on half <i>batai</i> .
Rotation	..	.. Cane followed <i>senji</i> , with cotton before it.

Operation.	Date.	No. of times done in quick succession.
Ploughing	29th March ..	Twice.
Levelling with <i>sohaga</i> and making beds	" " ..	Once.
Watering	31st " ..	"
Ploughing	2nd April ..	Twice.
Sowing	3rd " ..	"
Applying clod-crusher	5th " ..	Twice.
Beating soil with <i>thapris</i>	7th " ..	Once
Hoeing	" " ..	"
" "	11th " ..	"
Beating soil with <i>thapris</i>	" " ..	"
Watering	18th " ..	"
Weeding and hoeing	21st " ..	"
Beating soil with <i>thapris</i>	22nd " ..	"
Watering	30th " ..	"
Weeding and hoeing	2nd May ..	"
Beating soil with <i>thapris</i>	3rd " ..	"
Watering	" " ..	"
" "	12th " ..	"
Tying canes	1st September ..	"
Watering	" " ..	"
" "	9th " ..	"

Summary.

Manure .. ..	.. Nil.
No. of ploughings .. ..	.. 4
„ applications of <i>sohaga</i> .. ..	.. 2
„ waterings .. ..	.. 6
„ weedings and hoeings .. ..	.. 4
„ beatings with <i>thapris</i> .. ..	.. 4
Precautions taken .. ..	.. Tied canes.

(b). COTTON.

Area cropped 2 *kanals* of *Bet* land on *batai*. V. 1.
 Rotation Cotton was grown after *senji*,
 with maize before it.

Operation.	Date.	No of times done in quick succession.
Ploughing	20th-22nd April ..	Four
Watering	24th April ..	Once.
Ploughing	26th-27th ,, ..	Twice.
Sowing by <i>chhatta</i> method ..	27th April ..	.
Watering	1st September ..	Once.

Summary.

Manure Nil.
 Method of sowing *Chhatta* or broadcast.
 No. of ploughings 6
 „ waterings 2
 „ weedings and hoeings .. Nil.

(c). MAIZE.

Area cropped .. 5 *kanals* in two pieces on *batai*—
 Plot No. 1, 2 *kanals* of *Bet* land,
 „ „ 2, 3 „ *Daha* „

Plot No. 1.

Area 2 *kanals* of *Bet* land.
 Rotation Maize followed sugarcane.

Operation.	Date.	No. of times done in quick succession.
Carrying 4 cart-loads of manure and distributing in heaps ..	22nd June .	..
Scattering of manure .	7th August ..	..
Ploughing	7th-8th ,, ..	Twice.
Sowing by <i>kera</i> method ..	9th ,, ..	..
Weeding and hoeing ..	16th ,, ..	Once.
Watering	8th September ..	..

Summary.

V. 1.	Manure	..	.. 4 cart-loads.
	Method of sowing	..	.. <i>Kera</i> , or sowing in the furrow behind the plough.
	No. of ploughings	..	.. 2
	„ waterings	..	.. 1
	„ weedings and hoeings	..	.. 1

Plot No. 2.

Area	..	.. 3 <i>kanals</i> of <i>Dhaha</i> land.
Rotation	..	.. Maize followed <i>senji</i> , with maize before it.

Operation.	Date.	No. of time done in quick succession.
Carrying 2 cart-loads of manure and distributing in heaps ..	22nd June ..	..
Scattering manure ..	5th August ..	..
Ploughing ..	„ „ ..	Twice.
Sowing by <i>kera</i> method ..	6th „ ..	..
Weeding ..	17th „ ..	Once.
„ ..	21st „ ..	„
Watering ..	10th September ..	„

Summary.

Manure	..	.. 2 cart-loads.
Method of sowing	..	.. <i>Kera</i> , or sowing in furrow behind the plough.
No. of ploughings	..	.. 2
„ waterings	..	.. 1
„ weedings and hoeings	..	.. 2

(e). *Chari* fodder grown on about 16 *kanals* of *barani* land by *chhatta* method with ploughing of the plot before sowing.

VI.—F., *Tenant Cultivator.*

(a). SUGARCANE.

Area cropped .. $4\frac{1}{2}$ *kanals* of *Bet* land, of which $1\frac{1}{2}$ *kanals* V. 1.
are on *batai*, and the rest on a cash rent
of Rs. 4/- per *kanal* for the year.

Rotation .. Cane followed *senji*, with maize before it.

Operation.	Date.	No. of times done in quick succession
Watering ..	26th March ..	Once.
Ploughing ..	28th-29th March ..	Four.
Sowing ..	30th March ..	..
Applying clod-crusher ..	1st April ..	Twice.
" " " ..	8th ..	..
Watering ..	19th ..	Once.
Weeding and hoeing ..	21st ..	..
Beating soil with <i>thapris</i> ..	22nd ..	..
Watering ..	27th ..	..
" ..	6th May ..	..
" ..	15th ..	..
" ..	22nd ..	..
" ..	30th ..	..

Summary.

Manure .. Nil.

No. of ploughings .. 4

 " waterings .. 7

 " applications of *sohaga* .. 4

 " weedings and hoeings .. 1

 " beatings with *thapris* .. 1

(b). COTTON.

Area cropped .. 5 *kanals* having character-
istics of both *Dhaka* and
Bet, all on *batai* rents.
Only 2 *kanals* have been
considered, the remaining
3 *kanals* being cropped
mohondhi, i.e., second
growth of the crop sown
in the previous year.

Rotation .. The 2 *kanals* considered
grew cotton after wheat.

V. 1.

Operation.	Date.	No. of times done in quick succession.
Watering ..	22nd April ..	Once.
Ploughing ..	24th " ..	Twice.
Sowing by <i>chhatta</i> method ..	" " ..	"
Weeding and cutting grass ..	29th August .	Once.
" " " " ..	20th September ..	"

Summary.

Manure ..	.. Nil.
Method of sowing ..	.. <i>Chhatta</i> or broadcast.
No. of ploughings ..	.. 2
„ waterings ..	.. 1
„ weedings without hoeing ..	.. 2

(c). MAIZE.

Area cropped ..	.. 5½ <i>kanals</i> of land similar to that cropped with cotton.
Rotation ..	.. Maize followed wheat.

Operation.	Date.	No of times done in quick succession.
Carrying 17 cart-loads of manure and distributing in heaps	24th June ..	..
Scattering manure ..	5th-6th August ..	..
Ploughing ..	6th " ..	Twice.
Sowing by <i>kera</i> method ..	7th-8th " ..	..
Weeding and hoeing ..	17th , ..	Once.
Watering ..	1st September ..	„

Summary.

Manure ..	.. 17 cart-loads.
Method of sowing ..	.. <i>Kera</i> , or sowing in the furrow behind the plough.
No. of ploughings ..	.. 2
„ waterings ..	.. 1
„ weedings and hoeings ..	.. 1

(d). *Chari* fodder crop was grown by *chhatta* method on 13 *kanals*.(e). Melons were grown on 1½ *kanals*; they were partly consumed by the family and partly exchanged for grain.

VII.—G., *Tenant Cultivator.*

V. 1.

(a). SUGARCANE.

Area cropped	..	.. One <i>kanal</i> of land having the characteristics of both <i>Dhaha</i> and <i>Bet</i> lands, and subject to <i>batai</i> rent.
Rotation	..	.. Cane followed <i>senji</i> , with maize before it.

Operation.		Date.	No. of times done in quick succession.
Watering	..	31st March	Once.
Ploughing	..	2nd April	Six.
Sowing	..	3rd ..	..
Applying clod-crusher	..	10th ..	Four
Watering	..	18th ,	Once.
Weeding and hoeing	..	21st ..	..
Watering	..	10th May	..
Weeding and hoeing	..	12th ..	..
Watering	..	16th ..	..
"	..	21st ..	..
"	..	27th ..	..
"	..	1st June	..
"	..	7th ..	..
"	..	14th ..	..
"	..	19th ..	..
"	..	1st September	..

Summary.

Manure	..	.. Nil.
No. of waterings	..	.. 11
„ ploughings	..	.. 6
„ weedings and hoeings	..	.. 2
„ applications of <i>sohaga</i>	..	.. 4

(b). COTTON.

Area cropped 1½ <i>kanals</i> of land similar to that which grew cane, and subject to <i>batai</i> rent.
--------------	----	--

V.1.

Rotation

..

.. Cotton followed *senji*, with maize before it. Melon seed was sown with the cotton, but the crop did not flourish.

Operation.		Date.		No. of times done in quick succession.
Watering	..	23rd April	..	Once.
Ploughing	..	25th "	..	Twice.
Sowing by <i>chhatta</i> method	..	26th "	..	..
Weeding and hoeing	..	11th June	..	Once.
Watering	..	11th September	..	"

Summary.

Manure	..	..	<i>Nal.</i>
Method of sowing	..	..	<i>Chhatta</i> or broadcast.
No. of ploughings	..	..	2
,, waterings	..	..	2
,, weedings and hoeings	..	..	1

(c). MAIZE.

Area cropped	..	..	10 <i>kanals</i> of land similar to the above, subject to <i>batai</i> rents.
Rotation	..	..	Maize followed <i>senji</i> , with maize before it.

Operation.		Date.		No. of times done in quick succession.
Ploughing	..	7th-8th April	..	Once.
,,	..	3rd-4th August	..	Twice.
Sowing by <i>keri</i> method	..	5th-6th "	..	..
Weeding and hoeing	..	19th "	..	Once.
Watering	..	11th September	..	"

Summary.

Manure	..	..	Nil.	V 1.
Method of sowing	..	..	<i>Kera</i> , or sowing in the fur-row behind the plough.	
No. of ploughings	..	..	3	
„ waterings	..	..	1	
„ weedings and hoeings	..	..	1	

(The holding of the tenant is situated where it is liable to receive the village flood water when there is rain, and hence there is no need to apply manure).

(d). *Chari* fodder crop was grown by *chhatta* method on 20 *kanals* of *barani* land subject to *batai* rent.

VIII.—H., Tenant Cultivator.

(a). SUGARCANE.

No *Bet* land for the crop was available on cash rents; but on *batai* only, and the cultivator grew no sugarcane.

(b). COTTON.

It was with great difficulty that this tenant succeeded in getting 1½ *kanals* of *Bet* land on a rent of Rs. 4/- per *kanal* for the year; owners prefer *batai* because of the irrigation facilities.

Rotation Cotton followed sugarcane.

Operation.	Date.	No. of times done in quick succession
Watering	.. 29th March ..	Once.
Ploughing	.. 31st „ ..	Thrice.
Sowing by <i>chhatta</i> method	.. 1st April ..	..
Watering	.. 18th May ..	Once.
Weeding and hoeing	.. 20th „ ..	„
Watering	.. 27th August ..	„
„	.. 9th September ..	„

Summary.

V. 1.	Manure	..	.. Nil.
	Method of sowing	..	.. Chhatta or broadcast
	No. of ploughings	..	.. 3
	„ waterings	..	.. 4
	„ weedings and hoeings	..	.. 1

(c). MAIZE.

Area cropped	..	9 kanals of Bet land in two pieces— Plot No. 1, 3 kanals „ „ 2, 6 „
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Plot No. 1

Area 3 kanals of Bet land subject to cash rent of Rs. 4/- per kanal for the year.
Rotation		.. Maize followed melons, which had yielded Rs. 50/-, as well as some used for family consumption.

Operation.	Date	No. of times done in quick succession.
Carrying 12 cart-loads of manure and distributing in heaps	24th June	..
Scattering manure	7th August	..
Ploughing	7th-8th „	Twice
Sowing by <i>kera</i> method	9th „	..
Weeding and hoeing	17th „	Once.
Scattering 2 cart-loads of <i>kallar</i> (earth of runs) over the plot	24th „	..
Watering	25th „	Once.
„	8th September	„

Summary.

Manure	..	.. 12 cart-loads of manure plus 2 cart-loads of <i>kallar</i> .
Method of sowing	..	.. <i>Kera</i> , or sowing in the furrow behind the plough.
No. of ploughings	..	.. 2
„ waterings	..	.. 2
„ weedings and hoeings	..	.. 1

PLOT No. 2.

Area 6 *kanals* of *Bet* land sub- V. 1.
 ject to share rents.

Rotation Maize followed wheat.

Operation.	Date.	No. of times done in quick succession.
Carrying 12 cart-loads of manure and distributing in heaps	16th July	..
Scattering manure .	6th August .	..
Ploughing ..	6th-7th August .	Twice.
Sowing by <i>kera</i> method ..	8th August ..	
Ploughing the sown field, <i>ie</i> , <i>chhamb</i> ..	9th .. .	Once.
Weeding and hoeing ..	17th-18th August .	..
Scattering 6 cart-loads of <i>kallar</i> over the plot .	26th August .	..
Watering ..	27th .. .	Once
„ ..	9th September ..	..

Summary.

Manure 12 cart-loads of manure
 plus 6 cart-loads of *kallar*

Method of sowing . .. *Kera*, or sowing in the
 furrow behind the plough.

No. of ploughings .. 3 including *chhamb*.

„ waterings .. 2

„ weedings and hoeings . 1

(d) The cultivator grew *chari* fodder crop on 8 *kanals* of *barani* land by *chhatta* method subject to cash rent of Rs. 2/- per *kanal* for the year.

In the table on the next page, the efforts of owners and tenants in the cultivation of sugarcane, cotton and maize are summarised.

For sugarcane, if we exclude the case where cultivation was exceptional because of faulty rotation, the largest number of ploughings was 8 and of waterings 12, and this maximum is found where cultivation

TABLE XXVI.—Statement showing Summary of Efforts of Owners and Tenants in Cultivation of Sugarcane, Cotton and Maize.

V. 1.		OWNERS.				TENANTS.			
		A.	B.	C.	D.	E.	F.	G.	H.
		I.	II.	III.	IV.	V.	VI.	VII.	VIII.
					Plot. 1* 2				
	<i>SUGARCANE.</i>	11 K.	3 K.	5 K	4 K 2 K.	3 K.	4½ K	1 K.	1 K.
	No. of Ploughings ..	5	8	4	11 5	4	4	6	
	Waterings ..	12	9	9	9 7	6	7	11	
	Weedings and hoeings	4	1	2	6 4	4	1	2	
	Beatings of soil ..	..	..	1	2 2	4	1	..	
	Applications with clod-crusher ..	4	7	4	5 8	2	4	4	
	Manure used per kanal (cart-loads) ..	..	..	1	.. ..	.	..	..	Not grown.
	Miscellaneous effort .. (\$ Tied canes.)	\$	\$	\$	.. ..	\$	..	..
		I.	II.	III.	IV.	V.	VI.	VII.	VIII.
		Plot 1 2†							
	<i>COTTON.</i>	6½ K. 6½ K.	5 K.			2 K.	2 K.	1½ K	1½ K.
	No. of Ploughings ..	1 4	2			6	2	2	3
	Waterings ..	4 8	3			2	1	2	4
	Weedings and hoeings	.. 2	2			..	2**	1	1
	Manure used per kanal (cart-loads) ..	.. 17	..			..	..	..	..
	Miscellaneous effort (Ohhamb) ..	1 .	..			..	..	..	..
		I.	II	III.	IV.	V.	VI.	VII.	VIII.
		Plot. 1 2	Plot. 1 2 3		Plot. 1 2	Plot 1 2			Plot 1 2
	<i>MAIZE.</i>	4 K. 4 K. 6 K. 2½ K 4½ K	8 K. 4 K. 4 K	2 K 3 K	5½ K	10 K 3 K. 6 K.			
	No. of Ploughings ..	2 6	3 5 4	1 4 4	2 2	2 3	2 3	2 2	
	Waterings ..	2 3	1 1 1	1 1 2	1 1	1 1	1 1	2 2	
	Weedings and hoeings	1 1	.. ..	3 1 1	1 2	1 1	1 1	1 1	
	Manure used per kanal (cart-loads) ..	4 5½	6½ 3¾ 4¼	3½ 2 3½	2 ¾	3¹/₁₁	† 4¾	3	
	Miscellaneous effort .. (Ohhamb)	.. ..	.. ..	.. ..	.. .	.. ..	.. ..	.. 1	

* Cultivation abnormal on account of faulty rotation.

† The plot had melons on it also.

** Only weeding.

‡ Self manured by flood water from village.

is by owners. In respect of weedings and hoeings for this crop there is V. 1. practically no difference between owners and tenants.

Beating the soil with *thapris* (wooden implements) and running the *sohaga* (clod-crusher) have the same effect in the case of the cane crop; they are done with a view of retaining moisture and preventing damage from white ants. Beating with *thapris* is generally preferred when the plot is small in area. If the two operations are taken together, it is seen that the effort of the owners is considerably greater than that of tenants.

In the case of cotton, owners' holdings number only two, and the figures hardly warrant any comparison being drawn.

For maize it would appear that the owners have applied considerably more manure than tenants, and have also given more attention to ploughings and waterings.

On the whole it seems to be true to say that owners are more careful and industrious than the tenants in the cultivation of their holdings. Tenants often display greater intensity of effort than some owners on holdings which are let to them on cash rents, but generally the owners are better cultivators. The methods of cultivation followed are the same in both cases.

2. There is little difference in cropping as between owners and V. 2. tenants; the latter tend to grow the more profitable crops on holdings which are subject to cash rents; they may also grow them on *batai* land, but only when this cannot be avoided. As has been noted above, sugarcane and cotton were grown on *batai* land, H. failed to obtain land on cash rent for sugarcane and he refrained from growing it, but grew more vegetables than the others; he did this on the area subject to cash rents. The prevalence of the *batai* system is largely responsible for the fact that there is little difference in cropping as between owners and tenants. Although there is little difference in cropping, there is, however, a difference in the attitude towards the disposal of certain crops. Small owners and tenants grow crops such as vegetables with the idea of making a profit by sale, while large owners for the most part, and medium owners, though to a less extent, grow them so that they may avoid the necessity of purchase, and be able to 'eat at will in plenty.' To sell them is regarded as being below their position, even if the yield is over and above their requirements. For example, A. used the surplus yield

- V. 2. of his melons in feasting and making presents; he did not sell them though he was offered Rs. 12/- per *kanal* for them by a dealer in vegetables.
- V. 3. 3. Tenants hardly ever think of planting trees on the holdings they cultivate, and their attitude is not surprising, few would undertake a task which involves labour and returns no profit. The trees belong to the owners and a tenant has to get permission from the owner even if wood for an implement is required. Such trees as stand on holdings owe their existence to the care and effort of the owner; the tenants are rather careless even about those which have already been planted.
- V. 4. 4. "He who stays at an inn for a night does not go on to the roof to stop a leak; he shifts his bed." Generally land is let by owners every year and a tenant is liable to be ejected at the end of the year, and sometimes even after one harvest. He, therefore, only tries to take out of the soil what he can get without great effort. His uncertain position acts as a deterrent. "If I improve the fertility of a plot by manuring, etc., the owner shifts me to another next year and brings my old plot under his own cultivation," said H. D. spoke in a similar strain:-- "My owner left it to my choice to take as much manure from him as I wanted, but I have applied barely two cart-loads per *kanal*, manure affects the second crop and the third crop as well as the first, but I do not know who is to cultivate my plot next year. Why should I have troubled myself to carry any more of it?" Owners try to enhance the worth of poor land by sinking new wells and repairing old ones manuring more than tenants, levelling, etc. B. every year strengthens the embankments of his fields by raising them more than two feet above the ground level to retain rain water, and so do many others. Holdings under owner-cultivation can often be distinguished at sight.
- V. 5. 5. There is a remarkable difference in the cattle kept by owners and tenants. A tenant's cattle are as a rule of mediocre quality, for he buys at a low rate. If he buys strong and valuable cattle he does so with a view to profit in some way not connected with cultivation; the keeping of good cattle for cultivation only is regarded by them as unremunerative. Large owners keep good stock for the sake of manure and breeding.
- * Medium and small owners do the same though on a smaller scale. Details

are given below of the stock kept by the owners and tenants who were studied in connection with the cultivation of their land :— V. 5.

Owners.

- I.—A. has 3 oxen and 1 male buffalo, all of average health and reared at home, 2 cow buffaloes; 4 young male buffaloes, 1 cow, 4 young cows, 1 calf, 4 goats, 1 kid; and 2 riding mares.
- II.—B. has 3 oxen of good health; 1 male buffalo, 2 young cow buffaloes; 1 cow and 1 calf.
- III.—C. has 5 oxen of average health, 1 cow and 1 calf.
- IV.—D. has 3 oxen, 1 cow buffalo, which he puts to the plough, and a cow: all are of average health.

Tenants.

- V.—E. has 1 ox and 1 male buffalo. The ox is mediocre, but the buffalo is very healthy; in addition to field work, it is used for stud purposes. The charge for each covering is one rupee. The owner earns from Rs. 100/- to Rs 120/- a year in this way. He keeps one more young male buffalo.
- VI.—F. keeps 1 ox, 1 buffalo, 2 young cows, 1 cow buffalo and its young male calf. He is a *faqir* by caste and has also some income as a menial.
- VII.—G. has 2 oxen of ordinary health, and 1 cow buffalo with a calf.
- VIII.—H. keeps 3 oxen of average health, 1 cow and 1 calf. He also plies a cart for hire.

6. With regard to buildings all the tenants have *kachcha* houses and sheds; the wood used in their construction is grown locally. The buildings of the two small owners who were studied are similar to those of tenants. B, a medium cultivating owner, has a *kachcha* house and a shed, but he has one more small building for guests, made of *pacca* bricks; the wood used for ceiling, doors and windows is *deodar* and *chil*. A., the large cultivating-owner, has *kachcha* buildings for storing straw and fodder; his shed is *pacca* and the wood used for it is *deodar* and *chil*. His dwelling house is also *pacca*, but it is an old building and the wood used for it was grown locally. V. 6.

V. 7. 7. So far as the education of children is concerned, tenants and small owners do not spare their children for school. Medium owners are inclined to allow education only to those boys who seem promising, while the large owners are anxious to have all their sons educated. The children of large owners seem to show a disinclination towards education. A is a large owner here and also elsewhere; his elder son gave up school while he was in the sixth class, to the great disappointment of his father. "The dominating idea in my mind was that my father was a big owner and I have plenty at home," said the boy. The younger too is not a promising lad; he is in the fifth standard but is usually at the bottom of the class. A. is very anxious for him to improve and to see him well educated, even if he may fail occasionally.

B. (a medium owner) has four sons, three are still young and the eldest is in the third primary class. "I shall see if they are bright," said B, when asked how far he would educate them.

C. and D (small owners) and all the tenants have no children at school. When questioned they replied to the effect that the children prefer home work more than formal education.

Generally speaking the village is backward in education. In December 1925 there were 120 boys on the roll of the village primary school. Of this number only twenty boys are sons of village agriculturist fathers and only six out of the twenty belong to fathers who cultivate. People argue that education, as it exists at present, is not only a failure for enabling a young man to earn his living, but is also a great drawback in that it leads him to adopt a higher standard of living, owing to which he cannot fall back on agriculture for a livelihood if he fails to get into service. So far no agriculturist boy in Tehong has read beyond the Matriculation standard and at present there are only three Matriculates among the agriculturists; these are all sons of medium owners and they are trying to get posts as *patwaris*.

v. 8. 8. With regard to the careers of the children, an owner's ambition is that his children should follow callings other than agriculture; the calling he hopes for varies with his idea of personal respectability, and this depends upon the amount of land he owns. A large owner does not like his son to adopt inferior service if he fails to get such a post as the father believes his *izzat* (prestige) demands. Almost any Government post is considered superior to agriculture. A medium owner would similarly

prefer his son to adopt the ancestral occupation of a cultivator instead of his earning money as a labourer. But small owners and tenants want money earned in any decent way, even if a son does not become a cultivator. V. 8.

9. The standard of living is naturally related to the amount of land owned and the income therefrom; so also is the standard of needs for which debts are incurred. The large owner's standard of living is apt to be higher than that of medium owners, and that of medium owners better than that of small owners, which is similar to that of the tenants. The same applies to the amount of indebtedness. V. 9.

A. is the largest owner in the village and he also owns land elsewhere. His debts amounted to Rs. 10,000/- on the 13th September 1925. B. is by way of being a money-lender. Of the small owners, the debts of D. and C. are Rs. 100/- and Rs. 77/- respectively.

Among the tenants, G. owes Rs. 140/-, E. Rs. 200/-, H. is free from debt, while F. owes a debt of Rs. 230/-. G. has recently purchased an ox for Rs. 60/-, and this sum is included in the above Rs. 140/-. E. has come down from the position of a medium owner by selling much, and mortgaging the rest, of his land; F. incurred a debt of Rs. 160/- with the marriage of his two children only a few days earlier; small owners and tenants have usually the same standard of debt.

The amount of land owned, the standard of cultivation, the reputation of the individual for repaying loans, and the relations with the money-lender are the chief factors in influencing the facility with which credit can be obtained. All A.'s debt (Rs. 10,000/-) is subject to interest at 6 per cent. He is a big owner, and the lender is his brother-in-law. He has no difficulty in getting further loans. B. is a money-lender and can obtain credit easily, for he is a good cultivator, and also a medium owner. D. (a small owner) owes a debt of Rs. 100/-. He can obtain credit only with difficulty and he has to pay the highest rate of interest prevalent in the village, i.e., 2 pice a rupee per month or $37\frac{1}{2}$ per cent. per annum; he is known to the people as a poor repayer of loans. C. (also a small owner) is indebted to the extent of Rs. 77/- to the village Co-operative Society. He is a good cultivator, and a punctual repayer, hence he finds no difficulty in obtaining credit.

V. 9. Of the tenants, E. and G., experience difficulty in obtaining credit. They have borrowed the sums mentioned above, from or through their very near relatives after much trouble. One of them has sold or mortgaged all his land and has the reputation of being a spendthrift ; the other's father, who has by a will deprived one of G.'s brothers of any share in the ancestral property after his death, has also turned G. out to work and to live elsewhere rather than on his own land, and G. has not yet established himself. F. is a *faqir* by caste, he finds no difficulty in obtaining credit as he is a good cultivator and knows how to repay loans as silently as he borrows. Only recently he borrowed Rs. 160/- at 15 per cent. interest. H. is free from debt, is a good cultivator and also plies a cart for hire. Although, because of religious scruples, he seems to be opposed to borrowing and lending on interest yet, whenever he needs small sums of Rs. 20/- or thereabouts, he can borrow from his neighbours or relatives without interest.

V. 10. 10. Of the four owners mentioned above all but D. are members of the village Co-operative Credit Society. D. was a member, but he ascribes the reason of his withdrawal to the Society hesitating or refusing to give loans to him. As a matter of fact he is a bad repayer of loans, as has already been said. None of the tenants is a member of the Society. F. has never thought of becoming a member ; H. is against the institution for religious reasons ; G. says that he was told he was too late to have a share, and E. because of his failure to get loans—being a spendthrift—withdrawed from the Society.

CHAPTER VI.

LAND REVENUE AND TACCAVI.

1. The figures given below indicate the fixed land revenue imposed at previous settlements and at the last settlement :— VI. 1.

<i>Settlement year.</i>		<i>Fixed land revenue,</i>	
			<i>Rs.</i>
1. 1846 (Summary Settlement)	4,350
2. 1850-51	4,600
3. 1885	5,250
4. 1913-17	7,000

2. The total cultivated area of the village in 1923-24 was 2,161 acres and the present fixed demand is Rs 7,000/- The incidence per cultivated acre is, therefore, Rs. 3/3/10. VI. 2.

3. Of the fixed demand the sum of Rs. 136/- is deferred on account of protective well leases. VI. 3.

4. There being no canal irrigation in this village, the question of occupiers' rates does not arise. VI. 4.

5. The following figures indicate what the village has paid as (a). land revenue, and (b). cesses, in each of the past five years :— VI. 5.

TABLE XXVII.—*Showing Land Revenue and Local Rates paid from 1919-20 to 1923-24.*

Year.		Land Revenue.	Local Rates.	Total.
		Rs.	Rs.	Rs.
1919-20	..	6,910	720	7,630
1920-21	..	6,910	720	7,630
1921-22	..	6,910	720	7,630
1922-23	..	6,910	720	7,630
1923-24	..	6,941	723	7,664

VI. 5 The total sum paid by the village in land revenue and cesses in the past 5 years is Rs. 38,184/-, or Rs. 7,636/12/9 per year on the average.

In the table given below the matured area for each of the harvests during the past 5 years is shown:—

TABLE XXVIII.—*Showing Area Matured in Tehong from 1919-20 to 1923-24.*

Year.	<i>Kharif.</i>	<i>Rabi.</i>	Total.
	Acres.	Acres.	Acres.
1919-20 .	1,001	915	1,916
1920-21 ..	497	768	1,265
1921-22 ..	943	1,345	2,288
1922-23 ..	1,030	1,386	2,416
1923-24 ..	936	1,487	2,423
<i>Average of 5 years ..</i>	<i>881</i>	<i>1,180</i>	<i>2,061</i>

The average incidence per matured acre is thus Rs. 3/11/3. The following table shows how much wheat the *zemindar* had to sell in order to pay the land revenue per acre in 1850-51, 1885, and 1913-17.

TABLE XXIX.—*Showing Land Revenue expressed in terms of Wheat.*

Year.	Assessment per acre cultivated.	Sale rate of wheat per rupee.	Total wheat a <i>zemindar</i> must sell to pay his land revenue per acre.
	Rs. a. p.	Seers.	Seers.
1850-51 ..	2 2 2*	34†	72·6
1885 ..	2 5 11*	27†	64·0
1913-17 ..	3 0 7	12‡	36·4
1923-24 ..	3 3 10	8	25·9

* Settlement Report, 1885.

† Punjab Gazette.

‡ Circle Note Book.

6. The land revenue has always been paid punctually during the past five years, hence the authorities have never found occasion to apply pressure. The *lambardar* very often pays out of his own pocket and recovers later from the owners, for this he borrows from the money-lender on *bihar* (interest), generally one pice per rupee per month, i.e., 18 $\frac{3}{4}$ per cent per annum. There is considerable difficulty in the payment of the December instalment for which D., *lambardar*, sometimes borrows as much as Rs. 400/-. A *lambardar* is almost obliged to pay from his own pocket, otherwise his *panchotra* (commission) is liable to be confiscated. VI 6

7 & 8. Some owners borrowed from the village Co-operative Society to pay the last *rabi* land revenue instalment. N. borrowed Rs. 12/- on 1st June 1925; he had no surplus produce to sell. R. and M. borrowed Rs. 30/- and Rs. 40/- respectively on 10th and 3rd of June; neither of the two had any surplus produce. O borrowed Rs. 50/- on the 6th June 1925, he withheld surplus wheat with a view to secure a better price in view of his daughter's marriage festivities. The result of an investigation into the sources from which the *rabi* instalment of land revenue was paid by each of 30 owners is given below. Ten cases have been taken of large owners, ten of medium and ten of small. VI. 7 & 8.

Large Owners.

A. paid from his savings; B. out of the sale price of the fruit of his mango garden, C., having given up cultivation, had saved the proceeds of the sale of his two oxen and he paid from this sum; D. (*lambardar*) borrowed what was necessary in addition to his *panchotra* allowance; he had no surplus wheat to sell before or after the payment; E. also borrowed as he had no surplus for sale; F., G., H., and I. paid off the instalment by selling wheat before the date of payment; J., as mentioned above, borrowed from the Co-operative Society.

Medium Owners.

A., B., C., D. and E. paid from the sale of surplus wheat. F., G. and H. had no surplus produce and they borrowed to make the payment. I. paid from his previous savings, and J. out of his earnings from casual labour.

Small Owners.

VI
7 & 8. A., B., C., D. and E. paid out of their earnings from casual labour, F., G. and H. by borrowing, they had no surplus to sell. I. paid from his savings. J. borrowed to make the payment, but later he repaid the amount after selling his wheat.

The *rabi* crop of 1925 was comparatively poor owing to frost and the failure of timely winter rains. Some four of the above-mentioned owners told the investigator that the unfavourable agricultural conditions of the year led them to keep some produce in store, until they saw the results of the next *kharif* harvest. They would consider this store as a surplus if the *kharif* brought them sufficient; otherwise it would serve to make up the deficit for home consumption.

It may be of interest to estimate the amount of produce, wheat and straw, which an owner has to sell to pay the land revenue per acre of cultivated land. The sale rates of the produce are those current at the time of harvest: viz, wheat, 8 seers a rupee, and straw or *bhusa* one *tangar* a rupee.

Taking first the case of *chahi* land, the land revenue which an owner has to pay per acre is Rs. 4/12/0. The outturn of wheat on such land may be taken as 14 maunds 28 seers of grain, and $52\frac{1}{2}$ *tangars* of straw or *bhusa* per acre. At the prevailing price of wheat at harvest time, an owner has to sell 38 seers of grain per acre to pay his land revenue. But as he is required to pay only half the land revenue in this harvest, he need not sell for this purpose more than 19 seers of grain. If the incidence be taken in terms of *bhusa*, $4\frac{3}{4}$ *tangars* would have to be sold to pay the whole land revenue demand, or $2\frac{3}{8}$ *tangars* to pay the *rabi* demand.

In the case of *barami* land, the land revenue per acre is Rs. 2/6/0. The outturn of wheat per acre may be taken as 9 maunds 18 seers of grain and $10\frac{1}{2}$ *tangars* of *bhusa*. At prevailing harvest prices the amount of grain which an owner must sell to pay the whole land revenue demand is 19 seers, and to pay only the *rabi* demand $9\frac{1}{2}$ seers. In terms of *bhusa* he would have to sell $2\frac{3}{8}$ *tangars* for the whole revenue demand, or $1\frac{3}{16}$ *tangars* for the *rabi* demand.

VI. 9. Owners are required to pay the land revenue in three instalments: in June, the beginning of December and the last week of January. There are no objections to the date fixed for the payment of the first instalment, as there is plenty of time for the *zemindars* to bring in and dispose of their wheat in time to meet the payment. S. and some others

have expressed the desire that this demand should be made somewhat earlier—in the month of May instead of June—and they think that this might lead to some economies on the part of *zemindars*. All the wheat is in by the middle of May and its presence in the house tempts the *zemindars* to extravagance. Sometimes money-lenders press them to repay their debts out of the fresh stock of wheat with the result that before the date of paying the land revenue instalment, their wheat stock is exhausted and they have to borrow

The date fixed for the payment of the second instalment seems to be very troublesome to the *zemindars* as well as to the *lambardars*, for maize is still in the sheaf, cotton not wholly picked and cane-pressing little more than begun. Thus a *zemindar* has to borrow D, *lambardar*, and other *lambardars* as well, complain about the date of the second instalment. Out of Rs. 500/- which D. has to collect for this instalment, he paid this year Rs 300/- and last year Rs 400/- from his own pocket. The *lambardars* as well as the *zemindars* would be pleased if the December instalment were combined with the January instalment. The proceeds of the cotton, maize and sugarcane crops would then be in, and they would be in a better position to pay the demand in one instalment.

10. In the past ten years remission of land revenue has only been made on one occasion, namely in 1919-20, when damage was done to crops by a hail storm. The amount remitted was Rs. 120/-.

12. With one exception the people of the village have never taken *taccavi* for any of the usual purposes, such as the sinking of wells, agricultural improvements, purchase of cattle, fodder or seed, etc. The exception is a *Jat* who borrowed in 1888.

13. The instalments were repaid with ease in this case.

14. *Taccavi* is not popular in this village. The people know quite well that the rate of interest charged in the case of a *taccavi* loan is lower than one even from the Co-operative Society, but they are under the impression that *taccavi* can be had only for sinking wells. J. sunk a well. In the beginning he thought of taking a *taccavi* loan but later he gave up the idea and preferred to borrow from a money-lender. He could have had a loan from the village Co-operative Society, but he did not do so. "If I borrow from the Government or the Society it becomes public and my *izzat* (prestige) is injured," was his explanation. He also complained that the Society did not lend big sums. Loans from money-lenders,

VI. 14. especially in the case of large sums are preferred, for they can be contracted privately and are known, if at all, to only two other persons, *viz.*, the witnesses on the pro-note. S. and K. say: "it is a question of *ruwaj*" (custom) the people of this village are not accustomed to *taccavi*.

There are also strong objections to the procedure by which *taccavi* is obtainable. Those in need have to go through a lot of trouble in the shape of pleasing the *patwari*, the *lambardars*, and the *zaildars* who must certify them as fit persons. Later *tahsil* officials are equally troublesome; they must be pleased in some way or another, otherwise their "come to-morrow" never ends, and every "come to-morrow" involves loss of time. The records show that people of other villages in the neighbourhood make much more use of *taccavi* for sinking wells. The reason why Tehong people avoid it may be traced to the extreme fragmentation and scattering of holdings. Where such conditions prevail a single individual owner hardly needs a well to himself; generally wells are sunk by several shareholders who have different ways of financing an enterprise, and *taccavi* is more suitable when the loan is being raised by one owner.

CHAPTER VII.

INDEBTEDNESS.

1. Of 185 cultivators' families, 50 are free from debt and 135 indebted. VII. 1. Of the total debt of Rs. 48,036/- incurred by the latter, the sum of Rs. 15,196/-, or 31·7 per cent of the whole, is due to personal expenditure, and Rs. 32,840/-, or 68·3 per cent. to expenditure connected with the needs of agriculture. Eleven families, out of those indebted, have also inherited a debt of Rs. 6,160/-, and if we take this sum into account, as well as Rs. 2,242/-, which is the interest due by the cultivators on their various debts on 1st June 1925, the total amount for which they are indebted comes to Rs. 56,438/-.

The average debt per cultivators' family then is over Rs. 112/- for personal expenditure, and Rs. 243/- for agricultural purposes, or Rs. 355/- in all. This high average, however, is mostly due to a few people with heavy debt. There are 11 who owe over Rs. 700/- each, of whom 7 owe over Rs. 1,000/-. Excluding these 11, the average of the remaining 122 families is Rs. 231/-.

2. Of the 110 members of the local Co-operative Credit Society, nearly VII. 2. all have borrowed to repay old debt. In all Rs. 13,587/- have been borrowed for this purpose, while another Rs. 2,145/- of old debt have been repaid by saving. Of old debt repaid 86·5 per cent. has thus been raised by further borrowing, and 13·5 per cent. by saving. Rs. 2,579/- (82·4 per cent.) have been borrowed to redeem land as compared with only Rs. 552/- (17·6 per cent) found for this purpose from savings. For the repayment of old debt and the redemption of land, the members have borrowed from the Society rather than paid from their own savings. When, however, we turn to those more prosperous we find the proportions reversed. Of the purchase money for land bought, only Rs. 6,887/- (31·2 per cent.) was borrowed from the Society and Rs. 15,125/- (69·8 per cent) found from savings. Similarly for land taken in mortgage, Rs. 690/- (5·4 per cent.) was borrowed from the Society and Rs. 11,932/- (94·6 per cent.) from savings. Out of 110 members of the Society, 99 borrowed to repay old debt or redeem mortgaged land. 26 members have bought land or taken it on mortgage: 24 of these have borrowed from the Society for the purpose and only two have found the whole sum from savings.

VII. 3. 3. In addition to the village Co-operative Credit Society, there are 29 money-lenders—17 non-agriculturists and 12 agriculturists. If mortgagees are included, the latter number rises to 62, 48 of whom are cultivators. Of the non-agriculturist money-lenders, 9 are *Banias* (*Aggarwals*), 2 *ghiwars* (water-carriers), 2 Brahmins, 2 *sunars* (goldsmiths), 1 *Khatri* and 1 *tarkhan* (carpenter). Of the agriculturist money-lenders, 2 are Sikh *Jats*, one of whom cultivates, 10 are *Arains* (Muslim), of whom 5 cultivate. All money-lenders, irrespective of caste or religion, take interest

Twenty years ago there were four non-agriculturist money-lenders, all *Banias* (*Aggarwals*), and three agriculturist money-lenders, one Sikh *Jat* and two *Arains*. Almost the entire business was in the hands of the former class. The *Bania* (*Aggarwal*) money-lenders are all owners descending from the same father, whose family acquired a considerable portion of the village land here and elsewhere before the Punjab Land Alienation Act came into operation in 1901. Now the land is changing hands only amongst the agriculturists. The agriculturist money-lenders are undoubtedly increasing in number and are developing their business of money-lending

The habit of repaying loans, which largely depends on cultivation, the amount of land owned and the relationship of the needy with the money-lender, are the chief factors affecting the rate of interest. The most common rate of interest charged by money-lenders of both classes is *paisa rupia*, or $18\frac{3}{4}$ per cent. per annum, although sometimes it is as high as $37\frac{1}{2}$ per cent. per annum and as low as 6 per cent. per annum. For the purposes of comparison, a statement is given on the following page showing the loans granted by money-lenders of both classes together with the rate of interest charged.

Loans secured on mortgage are preferred both by the creditor and the debtor; the former safeguards his investment and the latter obtains a lower rate of interest. In order to check the growth of the principal, the mortgagor hands over the possession of the land mortgaged to the mortgagee, who either lets it to the mortgagor himself or to another as his tenant, or cultivates it himself till the return of the loan. Non-agriculturist money-lenders for want of knowledge consider themselves ineligible under the Land Alienation Act to become mortgagees. Conversation with some of them indicates that they know little about the section of the Act under which they can take land in terminable mortgage for 20 years.

TABLE XXX — Showing the Amounts borrowed by Cultivators of Tehong from Money-lenders

VII. 3.

Rate of Interest.	Agricultur- ist money- lenders	Percentage.	Non-agri- culturist money-len- ders.	Percentage.	Percentage of total.
	Rs		Rs.		
1. Without interest *	3,937	71·0	1,609	29·0	13·0
2. At 6 per cent.	7,156†	100 0	.	..	16 7
3. At 9 „	1,150	100 0	..	..	2·6
4. At 12 „	250	19 5	1,028	80 5	3·0
5. At 15 „	..	..	460	100·0	1·1
6. At 18 „	..	..	200	100·0	0·4
7. At <i>paisa rupia</i> per month, i. e., 18½ per cent. ‡	2,324†	35 8	4,165	64 2	15 2
8. At 2 annas per ru- pee for a <i>shashmahi</i> (6 months), i. e., 25 per cent.	..	..	101	100 0	0 2
9. At 24 per cent. ..	117	66 1	60	33·9	0 4
10. At 1½ <i>paisa rupia</i> per month, i. e., 28½ per cent. ..	160	60 6	104	39·4	0·6
11. At 30 per cent. .	400	100·0	..	..	0 9
12. At 2 <i>paisa rupia</i> per month, i. e., 37½ per cent. .	200	66·7	100	33·3	0·7
13. On mortgages with possession .	19,135	100·0	..	..	45·0
<i>Total</i> ..	<u>34,829</u>	31·7	7,827	18·3	100·0

* Agriculturist money-lenders have lent because of sympathy, relationship and religious sentiments, and in the case of non-agriculturist money-lenders the debt is due to shop accounts and *hath udhar* or casual loans without interest.

† This sum includes Rs. 115/- on a mortgage without possession.

‡ This sum includes Rs. 100/- on a mortgage without possession.

|| The interest on the sum is to be paid after every 6 months, otherwise the interest is added to the principal.

VII. 3 Sometimes small loans are entered in a *bahi* or a *chopatta* (a simple ledger in which loans given and repaid are entered side by side) by money-lenders of both classes, though the non-agriculturist money-lenders, particularly the *mahajans**, use this more than agriculturist money-lenders. The interest is entered as payable half yearly or annually as the case may be. If the debtor fails to pay the sum due as interest after the period prescribed, it is added to the principal and the entry is recast, the total then being treated as principal. For sums over Rs. 20/- a one anna stamp is fixed in the case of loans given on a ledger account.

Generally, loans are given on Government stamped bonds without any further security. The rate of interest is recorded and such bonds are subject to a settlement of account after every three years. Those who have uncertain credit are given loans on the security of a third person of good credit; loans are also given on the security of ornaments, but on a small scale, the practice is generally followed by the womenfolk among themselves. In such cases interest is payable every month and the rate of interest varies from *paisa rupia* to *two paisa rupia* per month, i.e., from $18\frac{3}{4}$ to $37\frac{1}{2}$ per cent. The *Bania* (*Aggarwal*) money-lenders also give grain loans, of gram in particular, on *swayie* (quarter as much), and occasionally of wheat on *doohdi* (half as much) to the agriculturists of this and the neighbouring villages on condition repayment is made at the time of harvest.

“*Mool nalon bias piara*”—a money-lender loves the interest more than the principal, is a well known proverb. If the interest is repaid regularly the money-lender allows the principal to remain, for he finds in the debtor a regular source of income. Failure to pay an instalment of interest acts as a warning and a second failure drives the lender to enforce repayment.

VII. 4. 4. Of the non-agriculturists, nine *Aggarwals* have about Rs. 20,500/- and two Brahmins and a *Khatri* Rs. 3,100/- on loan; they earn about Rs. 4,423/- annually as interest. Five other men, *jhiwars*, *tarkhans* and *sumars*, have lent about Rs. 6,000/- and earn Rs. 1,124/- as interest. The total for non-agriculturist money-lenders is thus Rs. 29,600/- on loan, with a return in the way of interest of Rs. 5,547/-. The twelve agriculturist money-lenders have about Rs. 15,100/- on loan and earn Rs. 2,834/- as interest.

* *Banias*, *Khatri*s and Brahmins are known as *Mahajans*.

In addition to the above, the Co-operative Credit Society does a considerable business. On the 31st July, 1925, its accounts stood thus:—

TABLE XXXI.—*Showing the Financial Position of the Tehong Co-operative Credit Society on 31st July, 1925.*

			Rs.	a.	p.
Members' share capital	..	..	7,256	4	0
„ deposits	..	..	8,971	2	0
Non-members' deposits..	..	..	26,898	1	3
Reserve Fund	..	..	3,621	2	0
Interest accrued	..	..	2,651	1	3
<i>Total</i>			49,397	10	6

It was employed as follows:—

Loans advanced to the members	..	23,198	1	0
„ „ „ the Sargaondi Credit Union		19,222	4	0
„ „ „ Choheki Credit Union	.	5,620	7	3
Shares held in the Central Co-operative Bank.				
Jullundur	.. ..	375	0	0
One share in the Punjab Provincial Co-operative				
Bank	.. ..	20	0	0
Common Good Fund	. .	961	14	3
<i>Total</i>		49,397	10	6

The Society lends to members at a rate of 9½ per cent. Taking such loans only the Society will earn Rs. 2,170/7/0 annually as interest.

5 Repayment of loans is made from the sale of produce—grain and fodder when surplus—sale of cattle, land or houses, mortgage of land or houses, and cash earnings. VII. 5.

6. The total debts—mortgage debt, loans from the Co-operative Society and the money-lenders of the home village as well as other places—amounted to Rs. 54,196/- on 1st June 1925. Including interest the total amount due is Rs. 56,438/-. VII. 6.

VII. 6 With regard to the causes of indebtedness, the following have been given :—

TABLE XXXII.—*Showing Causes of Indebtedness in Tehong.*

Reasons for which the loans were taken	Amount due.			Percentage of total
	Rs.	a.	p.	
1. Payment of rents, leases and land revenue	1,233	10	8	2·2
2. Purchase of irrigation bags, carts and sugarcane presses, setting iron wheels on wells, repairing of wells, sinking iron tubes in wells	2,692	11	3	4·8
3. Taking land in mortgage	7,470	0	0	13·2
4. Purchase of land *	3,813	0	0	6·8
5. Redemption of land	1,047	4	7	1·9
6. Miscellaneous expenses due to the purchase of necessaries of life, including illness expenses	1,312	5	6	2·3
7. Celebration of marriages, funerals and other social observances†	9,296	2	3	16·5
8. Purchase of food grains in times of scarcity	821	14	8	1·4
9. Purchase of seed owing to bad crops in the preceding years	571	13	9	1·0
10. Purchase of fodder for the cattle in times of scarcity	1,416	11	11	2·5
11. Purchase of oil cakes, cotton seed, etc., for the cattle	142	7	7	0·5
12. Litigation	3,179	1	0	5·6
13. Education of a student	40	0	0	0·1
14. Building and repairs	627	9	9	1·1
15. Journeys to Canal Colonies to see relatives	84	13	9	0·1
16. Inherited debt	6,160	0	0	10·9
17. Purchase of milch cattle	1,407	14	1	2·5
18. Purchase of plough cattle	15,131	1	0	26·8
Total	56,438	9	9	100·0

* The sum includes Rs. 600/- due to the purchase of a house.

† Rs. 1,000/- are due to purchase of wives.

From the table it will be seen that the highest percentage of indebtedness (29·2 per cent) is due to the purchase of cattle—plough and milch. The reason is that whenever an animal falls ill the villager administers his own medicines or uses some prescription recommended by an old man, or one known as *siana* (clever), or one with a reputation for understanding cattle disease. Phillour is only 3 miles away from Tehong but the help of the Veterinary Assistant there is sought only rarely. People complain that unless they offer something to the Veterinary staff no attention is paid to them.

Serious epidemics among cattle are sought to be checked by *toona* or superstitious observances. During the year of this investigation an epidemic, named by the people *Galgootoo* or cattle plague, twice visited the village, and twice the *toona* was performed. Mortality due to the disease was heavy, 40 cattle died in a space of about 10 days. The cultivator, if he is to continue his industry, must replace casualties amongst his oxen. Shortage of fodder in times of scarcity tells upon the health and life of the cattle and weakens their power of resistance. Cattle are purchased when required and not unnecessarily.

The second highest percentage of indebtedness (16·4 per cent.) is due to expenditure on marriages, (including the purchase of wives), on funerals and on other social observances. Indebtedness due to these causes is found amongst the *Arain* community alone. Of the 135 indebted cultivators, only two are Sikh *Jats* and one is a *faqir*, and their indebtedness is not found under this head. The *Arains'* expenditure on such observances has increased. About 15 years ago no *Arain* woman here used to wear gold; every one had silver ornaments, but now all use gold ornaments; even a man in ordinary circumstances is compelled to keep abreast in the social march of the community. Clothes too at marriages are now fine and costly as compared with what they were in the past. An *Arain* could purchase a wife, if purchasing were resorted to, for Rs. 100/-, but now the price has risen as high as Rs. 500/- to Rs. 1,000/-. Similarly the expenditure on the celebration of funerals and other social observances has risen.

Every one gave the terms of the bond on which money was borrowed, and the interest payable in each case, so there is little room for doubt as to the cause of indebtedness.

VII. 6. On 1st June 1925, the total amount of the cultivators' debts was Rs. 56,438/-, but as has been mentioned before, this includes a sum of Rs. 2,242/- as interest due to be paid by cultivators on debts incurred. The amount borrowed from the Co-operative Society is Rs. 11,540/- and the interest on it, at $9\frac{3}{4}$ per cent totals Rs 113/-. From money-lenders the sum is Rs 42,656/- and the interest on the individual sums for the period of each loan is Rs. 2,129/-. Of this principal Rs. 5,546/- are without interest, Rs 19,135/- are on mortgages with possession, so that interest is chargeable only on Rs. 17,975/-. Of this Rs. 1,150/- are subject to 9 per cent. rate of interest and Rs. 7,156/- to 6 per cent. The interest earned on these two sums is Rs 153/-. The rest of the principal, Rs. 9,669/-, is subject to various rates of interest all above 9 per cent. and the total annual interest on this sum is Rs. 1,976/-. Had the debts been borrowed from the Co-operative Society at its usual rate of $9\frac{3}{4}$ per cent. the interest would have been only Rs 977/-.

Indebtedness due to litigation is 5-6 per cent ; the persons concerned were involved in cases under Section 498 of the Indian Penal Code. They are said to have tried to save money, which otherwise would have been expended on marriages or in purchasing wives.

Some say that land revenue is a cause of debt. As put by them "Crops may succeed or fail, revenue has to be paid ; the *zemindar* must borrow or steal." According to others it is not a cause now whatever it may have been in the past, when the produce sold at low rates and irrigation facilities were small. Fragmentation of holdings is commonly regarded as a curse on the cultivators. The date of the first instalment of *khariif* revenue, which is due in the beginning of December, is alleged to be very unsuitable and hence a cause of borrowing, and there seems to be some truth in this.

Debts are encouraged up to the limit to which repayment is possible. The money-lender does his best to discover the total debt already incurred by the needy, and the income and source of repayment, and then he can deal with applications for loans.

VII. 7. 7. A. is highly indebted and the reason of his indebtedness is taking land on mortgage. He is practising economy to some extent in his standard of living, celebration of marriages, etc. Recently he married his son and although the expenditure he made on the occasion was high, yet it was not so high as before or as high as persons of his status usually make. "I need

money to get clear of debt, so I must observe thrift and economy," said he VII. 7 when accused of parsimony Meeting a complaint that his visits had become rarer, he replied, "I am more busy now and hope in four years to be quite free from debt" He lets his square of land in the Canal Colony on a yearly lease, the payment of which he usually receives in two instalments when he goes there. This year he has received both the instalments together at one visit, and consequently saved train fares by going there once instead of twice Moreover, he said, "A lump sum is better, small sums are liable to be frittered away in many directions."

M.'s debt is due to the sinking of a well and fixing a bucket wheel thereon. He too is practising economy like A.

Indebtedness sometimes leads people to try cultivation in the Canal Colonies J. has little hope here of getting clear of debt, and thinks of going to the Canal Colonies. Debt due to the untimely death of plough cattle is general, and sometimes a cultivator becomes disappointed and loses heart, gives up cultivation altogether and takes to casual labour. K. is an instance of the kind. Debt sometimes leads fathers to sell their daughters. Two men redeemed their land by selling daughters.

CHAPTER VIII.

MORTGAGES.

VIII.
1.

1. The account of mortgages in this Chapter and of sales in the next Chapter relates only to two *pattis* (sub-divisions) of the village, *viz.*, Hansian and Masani, which are in charge of one of the two *patwaris* of the village.

The following is an abstract of mortgages made in each quadrennial period during the last 20 years.

TABLE XXXIII—*Giving Details of Conditions of Mortgage Indebtedness for each Quadrennial Period from 1907-08 to 1923-24.*

Quadrennial year.	No. of mortgages made in the previous quadrenniums	AREA MORTGAGED IN ACRES.		Land revenue assessed on mortgaged area.	Total area mortgaged expressed as a fraction of the total area of the <i>pattis</i>	Cultivated area mortgaged expressed as a fraction of the cultivated area of the <i>pattis</i> .
		Total area.	Cultivated area.			
		Acres.	Acres.	Rs. a p		
1907-08 ..	52	39 381	39 381	110 7 0	39.3	39.3
1911-12 ..	78	43 156	43 137	109 3 0	43.1	43.1
1915-16 ..	70	20 225	19 806	45 7 6	20.2	19.8
1919-20 ..	66	32 387	31 956	129 12 3	32.3	31.9
1923-24 ..	53	23 581	23 350	87 8 3	23.5	23.3

VIII.
2.

2. Appendix A at the end of the Chapter gives details of mortgages recorded in one quadrennial period for each of the five *pattis* of the village. Below a brief summary is given of the results of the examination of these *pattis* for the quadrennial period chosen.

In *Patti* I. the number of mortgages recorded as having taken place in the preceding quadrennium in the quadrennial review of 1907-08 is 52. The total area mortgaged was 415 *kanals* 3 *marlas*, of which 195 *kanals* 16 *marlas* were *chahi* and 219 *kanals* 7 *marlas* were *barani*. The money received in mortgage was Rs. 7,733/10/0. The mortgage debt expressed as a multiple of the land revenue is 70.1. All mortgages in this *patti* are with possession and until repayment of mortgage debt. Of the 52

mortgages, 5 are embodied in registered deeds, 28 in unregistered deeds and 19 are verbal. The cultivation of mortgaged land is done by mortgagees in 35 cases, tenants-at-will in 13, partly mortgagee and partly tenant-at-will in 1, and the land is let on half *batai* in 3 cases. VIII.
2.

In *Patti* II. the number of mortgages recorded as having taken place in the preceding quadrennium in the quadrennial review of 1911-12 is 78. The total area mortgaged is 454 *kanals* 19 *marlas*, of which 168 *kanals* 7 *marlas* were *chahi* and 286 *kanals* 7 *marlas* *barani*, and 5 *marlas* *shamilat*, excluded from the table. The money received in mortgage was Rs. 12,041/4/0. The mortgage debt expressed as a multiple of the land revenue is 133 1. All mortgages in this *patti* are with possession and until repayment of mortgage debt. Of the 78 mortgages, 15 are embodied in registered deeds, 49 in unregistered deeds and 14 are verbal. As regards the cultivation of mortgaged land, mortgagees cultivate in 52 cases, tenants-at-will in 23, sub-tenants under tenants-at-will in 2, and in one case land is let on half-*batai*.

In *Patti* III. in the quadrennial review of 1915-16 the number of mortgages recorded is 70. The total area mortgaged is 213 *kanals* 14 *marlas* comprising 59 *kanals* 14 *marlas* *chahi*, 149 *kanals* 2 *marlas* *barani*, and 4 *kanals* 8 *marlas* *shamilat* not shown in the table. The mortgage money received was Rs. 9,244/1/0 and the mortgage debt expressed as a multiple of the land revenue is 203·3. All mortgages are with possession and until repayment of debts. Of the 70 mortgages, 11 are embodied in registered deeds, 29 in unregistered deeds, 29 are verbal and one is by order of the court. In 2 cases a share in the *shamilat* has been mortgaged. Of the mortgaged land mortgagees cultivate in 46 cases, tenants-at-will in 22, and the land is let to mortgagors on half-*batai* in 2 cases.

In *Patti* IV. the number of mortgages recorded in the quadrennial review of 1919-20 is 66. The total area mortgaged is 341 *kanals* 8 *marlas* made up of 210 *kanals* 8 *marlas* *chahi*, 126 *kanals* 9 *marlas* *barani*, and 4 *kanals* 11 *marlas* *shamilat* not shown in the table. The mortgage money amounted to Rs. 17,163/3/0 and mortgage debt expressed as a multiple of the land revenue is 132·2. Only one mortgage, viz., No. 16, is without possession and all are until repayment of debt. Of the 66 mortgages, 29 are embodied in registered deeds, 5 in unregistered deeds and 32 are verbal. In 6 cases a share in *shamilat* has been mortgaged. Mortgaged land is cultivated in 39 cases by mortgagees, in 10 by tenants-at-will, in 6 by sub-tenants under tenant-at-will and in 3 partly by both mortgages

- VIII. and tenant-at-will. The land is let on *half-batai* in 5 cases, on cash rent, on interest on debt, and for the payment of land revenue, one case each.

In *Patti V.*, 53 mortgages are recorded in the quadrennial review of 1923-24. The total area mortgaged is 248 *kanals* 12 *marlas* comprising 166 *kanals* 18 *marlas chahi*, 79 *kanals* 4 *marlas barani*, and 2 *kanals* 10 *marlas shamilat* not shown in the table. The mortgage money amounts to Rs. 17,453/13/0 and the mortgage debt expressed as a multiple of land revenue is 199 4. All the mortgages in the *patti* are with possession and until repayment of debt. Of the 53 mortgages, 19 are embodied in registered deeds, 5 in unregistered deeds and 29 are verbal. No share in the *shamilat* has been mortgaged. The cultivation of the mortgaged area is undertaken as follows:—by mortgagees in 20 cases, tenants-at-will in 20, sub-tenants under tenants-at-will in 2, partly by both mortgagee and tenant-at-will in 1 case. Land is let on *half-batai* in 3, on *chakota* rents in 4, and for the payment of land revenue in 3 cases.

- VIII. 3. The following statement shows the number of holdings in which there were mortgages for each quadrennial period examined for each *Patti*:—

TABLE XXXIV.—Statement showing the No. of Holdings in *Pattis* in which there were Mortgages in Quadrennial Periods from 1907-08 to 1923-24.

	QUADRENNIAL YEAR.				
	1907-08	1911-12	1915-16	1919-20	1923-24
No. of holdings	52	78	70	66	53
Of which the cultivated area is—					
less than 1 acre	2	7	19	18	5
Between 1 & 2½ acres ..	11	9	8	4	1
„ 2½ & 5 „ ..	13	11	7	5	4
„ 5 & 7½ „ ..	10	12	10	2	10
„ 7½ & 10 „ ..	7	18	15	13	18
„ 10 & 15 „ ..	8	16	9	19	11
„ 15 & 20 „ ..	1	4	1	4	4
„ 20 & 50 „ ..	..	1	1	1	..
More than 50 „ ..	..	..	..	..	..

Note—The same holding may come into account more than once.

TABLE XXXV.—Statement giving Details of Mortgages made in each Quadrennial Period from 1899-1900 to 1923-24.

Year of Quadrennial Jama bandi.	No. of Mortgages made in the previous quadrennium	Total area under mortgage.	Cultivated area under mortgage.	Mortgage debt.	Average mortgage value per acre.	Average mortgage value per acre cultivated.	Land revenue assessed on the mortgaged area.	Multiple of land revenue.
	2	3	4	5	6	7	8	9
1899-1900	110	94-844	93-925	Rs. a. p 14,370 2 6	Rs. a. p. 152 14 0	Rs a. p 152 15 11	Rs. a. p. 236 3 9	51-0
1903-1904	45	39-481	39-304	6,054 10 0	153 5 8	153 11 1	98 3 3	61-6
1907-1908	52	39-381	39 381	7,733 10 0	196 6 1	196 6 1	110 7 0	70-06
1911-1912	78	43-156	43-137	12,041 4 0	279 0 3	279 2 2	109 3 0	133-1
1915-1916	70	20-225	19-806	9,244 1 0	457 1 0	466 11 7	45 7 6	203-3
1919-1920	66	32-387	31-955	17,163 3 0	529 14 11	537 1 4	129 12 3	132-2
1923-1924	53	23-581	23 350	17,453 13 0	740 2 6	747 7 9	87 8 3	190-4

Note.—The figures of mortgage debts entered in the records are actual.

TABLE XXXVI.—*Statement showing Quadrennially the Number of Proprietary Holdings in Tehong in which Redemptions have been effected.*

VIII.
5. (a).

	QUADRENNIAL YEAR.		
	1915-16	1919-20	1923-24
No. of holdings	39	52	32
Of which the cultivated area is—			
less than 1 acre .. .	7	8	10
between 1 & 2½ acres .	4	1	
„ 2½ & 5 „ ..	10	9	2
„ 5 & 7½ „ .	11	8	1
„ 7½ & 10 „ .	2	9	3
„ 10 & 15 „ ..	3	14	11
„ 15 & 20 „ ..	1	2	5
„ 20 & 50 „ ..	1	1	..
More than 50 „ ..	..	..	..

Note.—The same holding may come into account more than once.

TABLE XXXVII.—*Statement giving Details of Redemptions made in Tehong in each Quadrennial Period from 1899-1900 to 1923-24.*

VIII.
5. (b).

Year of Quadrennial Jamabandi	No. of redemptions made in the previous quadrennium.	Total area redeemed.	Cultivated area redeemed.	Consideration money paid on account of redemption.
1	2	3	4	5
		Acres.	Acres.	Rs. a. p.
1899-1900	78	80·331	79·750	10,040 3 0
1903-1904	38	41·244	41·225	4,079 3 0
1907-1908	58	58·556	58·456	9,055 11 0
1911-1912	73	70 962	70 856	11,457 14 0
1915-1916	39	38·394	37·919	5,841 11 3
1919-1920	52	32·431	32·319	8,793 7 0
1923-1924	32	25·875	25·050	8,722 8 0

(c). Inquiry was made as to each of the redemptions effected from June 1913 to June 1924 to ascertain whether redemption was automatic; whether other land was sold or mortgaged in order to effect it; whether redemption was made by owner, mortgagor, or a subsequent vendee, and how the money was obtained to carry it out. 110 redemptions were effected during the period and details of these are given in Appendix B. to this Chapter; only a general summary is attempted here.

During the period no redemption occurred automatically on the expiry of an agreed period of years.

29 redemptions have been made by re-mortgaging the whole of the mortgaged land for more money or a part for the same money, and 7 have been made without repayment by getting only a portion of the land redeemed from the mortgagees, leaving the remainder as security for the original sum. In 13 cases the redemption money has been saved from profits of cultivation in the village and in 8 cases it has been saved from profits of cultivation in the Canal Colonies. 7 redemptions have been effected by mortgaging or selling other lands and 4 by selling houses; 2 have been made by selling portions of land that were mortgaged. In 4 cases the money has been saved from service, in 1 from income from land, and in 2 from income from casual labour, 3 represent merely transfer of mortgages from distantly to closely related persons for the same amount, and 3 have resulted from the mortgagees succeeding to the property of deceased mortgagors, while 10 have been made from savings of income from land, trade, service or money-lending. In 1 case redemption money has been saved from cultivation and service, in 2 by selling daughters, in 3 cases it has been secured from a money-lender and in 1 by borrowing from the Co-operative Society; in 1 partly by borrowing and partly by saving from cultivation; in 1 by income from land and cultivation; in 3 it has been saved partly from cultivation and partly from casual labour, in 4 cases the money has been borrowed partly from the Co-operative Society and partly saved from casual labour; and one redemption has been effected by selling cattle and giving up cultivation.

Of the 110 redemptions of the period. 76 have been redeemed by the mortgaging owners themselves, 21 by children or successors to the property of the deceased mortgaging owners; 10 have been made by purchasers of the mortgaged areas or subsequent vendees, and in 3 cases of redemptions mortgagors died and were succeeded in the

VIII. property by the mortgagees, whereupon the mortgages were entered as
5. (c). redeemed.

VIII. (d). During the past 11 years no redemption occurred automatically
5. (d). on the termination of a given period ; in no case has an automatically termin-
able mortgage been made as a means of redeeming a mortgage not subject
to such automatic redemption All mortgages made in the past 20 years
have been subject to redemption on the repayment of the debt. All re-
demptions in the past 11 years have been effected either by repayment of
debt, or by mortgaging or selling other areas, or by re-mortgaging the
whole of the mortgaged land for more money or a part for the same money,
or by getting part of the mortgaged land redeemed without payment from
the original mortgagee, when the latter has agreed to keep the mortgage
for the same consideration on a smaller area.

VIII. 6. For the total mortgages in existence at the time of the preparation
6. of the quadrennial *jamabandi* for 1923-24, the area has been mortgaged
as follows :—

	<i>Total.</i>		<i>Cultivated.</i>	
	<i>Kanals.</i>	<i>Marlas.</i>	<i>Kanals.</i>	<i>Marlas.</i>
(a). To <i>zemindars</i> of the village	..598	7	588	19
(b). „ „ „ other villages	.. 64	14	64	14
(c). To non-agriculturist money-lenders	.. .. 1	19	1	11
(d). To others	.. .. 15	10	15	10
<i>Total</i>	..680	10	670	14

The total existing mortgaged area is made up of 130 mortgages, of which only one includes a share in the *shamilat* and this is in favour of non-agriculturist money-lenders. The mortgages in favour of non-agricultural tribes in (c) and (d) above are dealt with in two registered deeds ; one in favour of the village *banra* and the other in favour of a *hajjam* (barber). Both the mortgages were executed before the Land Alienation Act came into force.

In the existing mortgages and all those that have been entered into during the last 20 years, the mortgagees were the real parties advancing the money. There has not been found any case of a *benami* transaction in this village, though cases were mentioned in neighbouring villages. VIII.
6.

Mortgagees prefer to invest their money in mortgages, because the repayment of a mortgage debt must be made in full, whereas debts given otherwise than on mortgage may be repaid in instalments and thus the person lending the money dislikes. A mortgage also avoids the trouble and expenditure involved in seeking enforcement of repayment through the courts. Cultivating owners and tenants like to take land on mortgage for the sake of adding to their cultivation. It saves the trouble of getting land on rent, and enables them to devote more attention to cultivation. To have taken land on mortgage is also regarded as increasing social prestige.

7. An owner who seeks to meet some pressing need by mortgaging his land has no difficulty in finding mortgagees; he usually means to repay the debt and uses the loan economically, he agrees to no entry of any amount over and above the actual sum received. Spend-thrifts, however, do experience difficulty in finding mortgagees, particularly when they have no special necessity for contracting the debt. When they have mortgaged much of their land they have been known to get their heirs to claim that the mortgage was not for legal necessity and so not binding on them. Mortgagees thus think twice before entering into such transactions, and when they do, the mortgagor may agree to receive less than the sum mentioned in the deed and care is usually taken to record some legal necessity in the deed. Persons who are regarded as being able to repay the debt in a year or so find difficulty in discovering a mortgagee as people prefer to advance money on mortgages which may be expected to run for years. It was asserted that if the *zemindars* had more money to invest in mortgages more owners would be willing to mortgage their land; that is to say the shortage of available capital restricts mortgage. VIII.
7.

8. In many cases the non-agriculturist money-lender seems to be ignorant of the law by which he can take the land of an agriculturist on mortgage for 20 years: and where he is aware of it, he does not regard this terminable mortgage as profitable. VIII.
8.

VIII. 8. From inquiry it would appear that no person has ever tried to change a mortgage of a more burdensome kind into one under Section 6 (a) of the Land Alienation Act. Money-lenders of both classes say that they would not agree to this; whether the money-lender be agriculturist or non-agriculturist, their profession is the same and they sympathise with one another in business affairs.

VIII. 9. For each of the 166 mortgages contracted during the last 11 years, i.e., from June 1913 to June 1924, inquiry was made to ascertain the reasons why the mortgage was made; whether the mortgagor got the money in cash, and if so, what he did with it; whether the mortgage consideration was the extinction of debt, and if so, how these debts were contracted; and in the case of share-holders, whether the mortgage was by all or by only some of them. The data thus collected will be found in Appendix C. A short summary of the results of the main facts is given in the list below, which shows the reasons why mortgage was resorted to.—

<i>Reason why the mortgage was made.</i>	<i>No. of cases.</i>
Redemption of other mortgages	9
Taking land in mortgage	2
Purchase of land	3
Re-mortgaging to get more money or redeem land	35
(In 23 cases this money has been in excess and the use to which the surplus was put is given on the next page.)	
Marriages	3
Transference from an unrelated person to a near relative	4
Litigation	7
Commencing cultivation in Tehong or elsewhere	6
Purchase of wives	2
Marriage and purchase of oxen	1
Payment of <i>chakota</i> rent	1
Purchase of oxen	1
Extinction of debts	78
<i>Total</i> ..	<u>166</u>

The cases in which the mortgagor obtained increased money by a further mortgage are 23, and the following explanation shows the uses to which the money in excess has been put. VIII.
9.

<i>Use.</i>	<i>No. of cases.</i>
Purchase of food-grains, clothes, etc. ..	7
Marriages	3
Purchase of oxen	3
Extinction of debts contracted for purchasing oxen	1
Litigation	4
Drinking, polygamy, etc. ..	5
<i>Total</i> ..	<hr/> 23 <hr/>

During the period 78 mortgages, as shown earlier, have been made purely for the extinction of debts which were contracted for the following reasons.

<i>Reason.</i>	<i>No of cases.</i>
Litigation	7
Purchase of plough cattle	25
Marriages	9
Marriages and purchase of plough cattle ..	4
Purchase of food-grains and plough cattle ..	1
Purchase of wives	4
Redemption of a mortgage, and purchase of <i>gadda</i> , cane-pressing mill, etc. ..	1
Purchase of plough cattle and implements ; sinking of wells	7
Emigration to Australia	3
Purchase of cattle and building a mosque ..	1
Purchase of goats	1
Purchase of food grains, clothes, etc. ..	3
Performance of marriage and purchase of a <i>gadda</i> ..	1
Gambling, drinking and polygamy .	11
<i>Total</i> ..	<hr/> 78 <hr/>

Of the 166 mortgages that have been made in the last 11 years, 74 have been made by the only owner ; 65 by one of the shareholders, (including 13 cases where one shareholder redeems the whole mortgage, and becomes the mortgagee of the shares of his co-sharers) ; 24 by all the shareholders ; and 3 by some of the shareholders only.

APPENDIX A. TO CHAPTER VIII.

TABLE XXXVIII.—Statements giving Details of Mortgages made in One Quadrennial Period in each of the Five Paths of Tehong.

PATTI I—QUADRENNIAL YEAR, 1907-08.

(All mortgages in this Patti are with possession and until repayment of debt).

Serial No.	Serial No. according to Mutation Register.	Total area owned by the mortgagor			AREA MORTGAGED			Date of mortgage	Amount of mortgage debt		Land revenue assessed on mortgaged area	Mortgaged debt as multiple of land revenue.	Rent if the mortgagor cultivates.	Who cultivates if not mortgagor (M'gee = mortgagor; T.W. = tenant-at-will)
		Ks	Ms.	Cultivated area owned by the mortgagor	Chaki.	Barani.	Total							
		Ks	Ms.	Ks.	Ms.	Ks.	Ms.	Ks.	Ms.	Rs.	a	p.		M'gee.
1	680	22	12	20	16	0	16	3	12	140	0	0	.	M'gee.
2	681	36	6	36	6	3	16	2	6	99	15	0	..	"
3	683	19	4	19	4	7	0	12	4	200	0	0	‡ Batai	"
4	684	19	4	19	4	3	10	6	2	100	0	0	"	..
5	687	60	17	60	8	11	11	11	18	489	0	0	"	T. W.
6	691	47	8	47	8	16	4	26	5	600	0	0	"	M'gee.
7	699	74	9	73	12	..	..	9	14	99	14	0	.	"
8	705	63	4	63	4	5	0	4	16	199	14	0	"	"
9	706	93	14	91	4	10	6	..	..	99	15	0	"	"
10	707	40	17	40	17	..	..	4	2	99	15	0	"	"
11	711	47	9	47	4	..	..	6	10	85	0	0	"	T. W.
													.	M'gee.

12	713	97	8	97	8	4	3	..	4	3	6-11-04	120	0	0	1	6	6	85	3	.	M'gee	
13	717	44	6	44	6	1	10	1	5	2	15	25-6-04	99	14	0	0	11	9	136	0	..	"
14	718	19	9	19	9	1	19	2	18	4	17	25-6-04	99	15	0	1	3	3	83	0	..	"
15	719	14	19	14	19	4	2	..	..	4	2	25-7-04	120	0	0	1	6	0	87	2	"	"
16	734	42	15	42	15	3	17	..	..	3	17	5-2-05	57	0	0	1	4	6	44	4	"	"
17	749	11	19	11	19	2	3	3	2	5	5	2-3-05	80	0	0	1	6	6	56	9	T. W.	"
18	751	29	5	29	5	8	3	.	.	8	3	18-5-05	98	0	0	1	11	9	34	6	M'gee.	"
19	752	29	5	29	5	..	..	7	13	7	13	18-5-05	98	0	0	1	6	0	71	2	"	"
20	759	40	17	40	17	4	10	7	6	11	16	3-6-05	300	0	0	2	13	3	106	0	"	"
21	760	23	10	23	5	..	..	14	16	14	16	3-6-05	500	0	0	2	10	0	114	3	.	"
22	763	46	2	46	2	..	..	3	6	3	6	7-6-05	50	0	0	0	9	3	96	2	"	"
23	765	88	4	88	4	5	15	7	9	13	4	3-6-05	200	0	0	3	4	9	60	6	"	"
24	767	38	4	35	5	2	4	2	11	4	15	12-6-05	70	0	0	1	3	6	57	4	"	"
25	769	71	16	71	16	6	0	..	..	6	0	6-6-05	80	0	0	1	1	0	75	3	"	"
26	780	46	2	46	2	..	..	8	0	8	0	12-6-05	99	14	"	1	6	9	70	2	1/2 Baldu.	"
27	781	40	17	40	17	..	..	1	19	1	19	12-6-05	60	0	0	0	5	9	166	9	M'gee.	"
28	794	46	13	46	13	..	..	4	2	4	2	2-12-05	70	0	0	0	11	3	99	5	T. W.	"
29	805	44	6	44	6	5	6	..	..	5	6	28-5-06	199	7	0	1	13	0	110	0	M'gee	"
30	806	15	14	15	11	4	1	..	..	4	1	30-5-06	90	0	0	1	6	0	67	2	T. W.	"
31	810	103	1	102	6	2	0	3	1	5	1	4-6-06	99	12	0	1	3	6	81	8	M'gee.	"
32	811	104	1	102	13	1	12	2	14	4	6	4-6-06	99	12	0	1	3	0	84	0	..	"

PATTI I.—concluded.

Serial No.	Serial No. according to Mutation Register.	Total area owned by the mortgagor.			Cultivated area owned by the mortgagor.			AREA MORTGAGED.			Date of mortgagc.	Amount of mort- gage debt.	Land revenue as- sessed on mort- gaged area.	Mortgaged debt as multiple of land revenue.	Rent if the mort- gagor cultivates.	Who cultivates if not mortgagor (M'gee = mort- gage; T. W. = ten- ant-at-will).
		Ks.	Ms.		Ks.	Ms.		Chahi.	Barani.	Total						
33	814	74	9	73	12	2	4	8	5	10	12	Rs a. p.	Rs. a. p.	77-2	.	M'gee and T. W. T. W.
34	861	46	13	46	13	4	0	3	5	7	5	130 0 0	2 4 3	100-2	.	"
35	862	46	13	46	13	4	0	..	..	4	0	70 0 0	0 11 3	99-5	.	"
36	865	73	19	73	19	10	10	6	8	16	18	297 0 0	4 4 9	69 1	.	"
37	870	16	3	16	3	2	3	8	11	10	14	82 0 0	1 8 3	54-4	.	"
38	871	16	3	16	3	3	4	.	.	3	4	60 0 0	0 14 0	53 3	.	"
39	879	34	19	34	17	6	8	17	19	24	7	500 0 0	5 6 9	92-2	.	M'gee
40	880	34	19	34	17	10	1	3	2	13	3	300 0 0	2 13 6	105-5	.	"
41	882	70	10	70	10	2	10	..	..	2	10	99 14 0	0 13 9	116 2	.	T W
42	883	70	10	70	10	2	10	..	..	2	10	99 14 0	0 13 9	116-2	.	"
43	884	70	10	70	10	1	0	..	..	1	0	49 15 0	0 5 6	145-2	.	"
44	885	167	3	167	3	11	4	11	4	400 0 0	13 14 0	28-8	.	M'gee
45	889	28	13	28	13	1	12	3	5	4	17	99 14 0	1 1 3	92-6	.	"

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	891	14	6	14	6	1	0	2	6	3	6	2-11-07	49 14 0	0 11 9	67.9	..	M'gee.
46																	
47	900	44	6	44	6	..		3	11	3	11	7-11-08	99 15 0	0 10 0	159.9	..	"
48	906	71	2	71	2	4	11	3	7	7	18	17-4-08	125 0 0	2 2 0	58.8	..	"
49	907	40	17	40	17	6	16	..		6	16	2-5-08	140 0 0	2 5 3	60.1	..	"
50	911	14	6	14	6	1	0	2	6	3	6	1-6-08	49 14 0	0 11 9	67.9	..	"
51	913	71	5	71	5	2	11	..		2	11	4-6-08	99 14 0	0 13 9	116.2	..	"
52	914	35	13	35	13	2	12	.		2	12	30-5-08	99 14 0	0 13 9	116.2	..	"
	<i>Total</i>	..	.	..		195	16	219	7	415	3	..	7,733 10 0	110 7 0	70.1	..	..

PART II.—QUADRENNIAL YEAR, 1911-12.

1	901	23	15	23	5	..	5	1	5	1	29-3-08	100 0 0	0 14 3	112 2	..	M'gee	
2	915	20	0	20	0	8	0	12	0	20	0	16-5-09	537 0 0	4 5 0	124 5	..	T. W.
3	922	38	4	35	5	..	5	10	5	10	9-6-08	99 14 0	0 15 9	101 4	..	M'gee.	
4	923	38	4	35	5	..	2	7	2	7	9-6-08	49 14 0	0 6 3	127 6	.	"	
5	924	38	4	35	5	.	3	10	3	10	9-6-08	49 14 0	0 10 0	79 8	..	"	
6	925	65	2	62	14	..	5	9	5	9	8-6-08	125 0 0	0 15 9	127 0	..	"	
7	929	73	19	73	9	10 10	2	1	12	11	8-6-08	297 0 0	3 4 9	90 0	$\frac{1}{3}$ <i>Balan.</i>	..	
8	941	44	6	44	6	2 3	2	3	June, 1908	99 14 0	0 12 6	127 8	..	M'gee.	
9	947	51	17	51	17	1 14	1	14	8-6-08	99 14 0	0 9 6	168 3	..	"	

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Serial No.	Serial No. according to Mutation Register.	Total area owned by the mortgagor	AREA MORTGAGED.			Date of mortgage.	Amount of mortgage debt.	Land revenue assessed on mortgaged area.	Mortgage debt as multiple of land revenue.	Rent if the mortgagor cultivates.	Who cultivates if not mortgagor. (M'gee = mortgagee, I V = tenant-at-will).
			Chahi.	Barani.	Total.						
		Ks. Ms.	Ks. Ms.	Ks. Ms.	Ks. Ms.		Rs. a. p	Rs. a. p.			M'gee
10	946	51 17	51 17	..	3 7	8-6-08	99 14 0	1 1 9	90-0	.	.
11	949	51 17	51 17	..	2 3	8-6-08	99 14 0	0 12 6	127 8	.	.
12	950	51 17	51 17	1 0	1 17	8-6-08	99 14 0	0 7 0	228 2	.	.
13	957	70 9	69 16	5 13	15 16	12-2-09	400 0 0	4 11 6	84-7	.	.
14	960	51 9	49 19	12 17	*23 3	25-5-09	250 0 0	6 0 0	41-6	.	.
15	962	53 17	53 11	3 10	3 10	24-5-09	99 15 0	0 10 0	159 9	.	.
16	964	53 17	53 11	0 18	0 18	24-5-09	32 0 0	0 2 9	186 1	.	.
17	963	53 17	53 11	3 10	3 10	24-5-09	99 15 0	0 10 0	159-9	.	.
18	966	23 15	23 5	4 9	4 9	24-5-09	99 15 0	0 12 9	125-0	.	.
19	967	23 15	23 5	3 8	3 8	24-5-09	99 15 0	0 10 0	159 9	.	.
20	968	23 15	23 5	3 10	3 10	24-5-09	99 15 0	0 10 0	159-9	.	.
21	973	31 18	31 6	8 1	9 19	2-6-09	99 15 0	2 8 0	39 9	.	.
22	974	31 8	31 6	8 1	9 19	2-6-09	99 15 0	2 8 0	39 9	.	.

*This excludes 5 marlas of shamilat (common land) also mortgaged.

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PATTI II—concluded.

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Serial No.	Serial No. according to Mutation Register.	Total area owned by the mortgagor.		Cultivated area owned by the mortgagor.	AREA MORTGAGED			Date of mortgage.	Amount of mortgage debt.	Land revenue assessed on mortgaged area.		Mortgage debt as multiple of land revenue.	Rent if the mortgagor cultivates.	Who cultivates if not mortgagor. (M'gee = mortgagor; T. W. = tenant-at-will).		
		Ks.	Ms.		Chaki.	Barani	Total			Rs.	a.				p.	Rs.	a.	p.
44	1043	21	1	21	0	13	3	Ks. Ms.	Ks. Ms.	Ks. Ms.	21-5-10	500	0	0	T. W.	
45	1046	38	14	38	1	..	..	9	19	9	19	25-5-10	300	0	0	M'gee.
46	1055	28	15	28	12	3	15	8	5	12	0	17-5-10	374	0	0	T. W.
47	1056	29	10	29	10	10	12	7	4	17	16	17-5-10	450	0	0	M'gee.
48	1061	47	17	47	4	..	..	5	11	5	11	21-7-10	163	0	0	"
49	1062	64	18	64	18	1	18	2	1	8	19	10-6-10	200	0	0	"
50	1066	43	18	43	8	0	9	1	11	2	0	16-7-10	99	15	0	"
51	1070	62	8	60	3	2	5	1	15	4	0	18-6-10	225	0	0	T. W.
52	1072	51	5	51	5	1	16	5	5	7	1	18-6-10	300	0	0	"
53	1073	62	8	60	3	3	19	6	4	10	3	27-6-10	400	0	0	"
54	1085	46	13	46	13	..	..	4	0	4	0	2-6-11	70	0	0	"
55	1089	93	14	93	14	5	8	10	17	16	5	7-6-11	300	0	0	M'gee.
56	1090	60	4	58	7	1	16	..	..	1	16	7-6-11	25	0	0	"
57	1095	60	4	58	7	9	6	10	12	19	18	7-6-11	240	0	0	"
58	1109	58	16	58	16	7	4	7	4	13-6-11	300	0	0	T. W.

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59	1111	58	16	58	16	6	8	13	19	14	10-6-11	700	0	0	5	0	9	138-7	..	M'gee. App. A
60	1112	32	8	32	8	1	15	1	18-7-11	90	0	0	0	4	9	303-1	..	T. W.
61	1113	17	19	17	17	..	..	1	9	1	14-6-11	99	15	0	0	4	3	378-2	..	M'gee.
62	1114	19	19	17	17	..	..	2	11	2	11-6-11	99	15	0	0	7	0	228-4	..	"
63	1115	17	19	17	17	..	..	2	15	2	14-6-11	99	15	0	0	7	9	206-3	..	"
64	1118	17	2	17	2	..	..	5	10	5	24-8-11	155	0	0	0	15	3	162-6	..	T. W.
65	1119	29	8	29	8	3	5	6	5	9	24-8-11	200	0	0	2	1	9	94-8	..	M'gee.
66	1120	44	6	44	6	..	..	2	11	2	19-7-11	85	0	0	0	5	6	247-2	..	"
67	1123	56	12	53	19	3	15	2	6	1	29-5-10	99	14	0	1	8	3	65-8	..	"
68	1124	168	2	169	16	3	15	2	6	1	29-5-10	99	14	0	1	8	3	65-8	..	"
69	1125	168	2	169	16	3	15	2	6	1	29-5-10	99	14	0	1	8	3	65-8	..	"
70	1126	111	10	105	17	3	15	2	6	1	29-5-10	99	14	0	1	8	3	65-8	..	"
71	1127	168	2	169	16	3	15	2	6	1	29-5-10	99	14	0	1	8	3	65-8	..	"
72	1130	43	18	43	8	2	5	..	..	2	20-1-12	99	14	0	0	12	6	127-8	..	"
73	1154	32	11	31	7	..	..	0	15	0	1-6-12	44	12	0	0	2	0	358-0	..	Sub-tenant under T. W.
74	1156	65	2	62	14	1	13	1	5	2	1-6-12	99	14	0	0	8	6	188-0	..	"
75	1158	185	5	180	4	..	..	2	18	2	3-6-12	51	0	0	0	8	6	96-0	..	T. W.
76	1159	32	4	31	13	2	2	..	..	2	30-5-12	99	0	0	0	11	0	144-0	..	M'gee.
77	1160	32	4	31	13	2	2	..	..	2	30-5-12	81	0	0	0	11	0	117-8	..	"
78	1161	50	2	48	16	2	7	6	18	9	5-6-12	166	7	0	1	15	6	116-2	..	T. W.
Total		168	7	286	7	454	14	12,041	4	0	109	3	0	133	1	..

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PATTI III.—QUADRENNIAL YEAR, 1915-16.

Serial No.	Serial No. accord- ing to Mutation Register	Total area owned by the mortgagor.		Cultivated area owned by the mortgagor.	AREA MORTGAGED			Date of mortgage	Amount of mort- gage debt.		Land revenue as- sessed on mort- gaged area	Mortgage debt as multiple of land revenue.	Rent if the mort- gagor cultivates.	Who cultivates if not mortgagor (M'gee = mort- gagor, T. W. = ten- ant-at-will).							
		Ks	Ms.		Chahi.	Barani.	Total.		Rs.	a					p	Rs.	a.	p			
1	1096	66	6	63	1	..	5	9	5	9	9-6-11	124	14	0	0	15	9	126	8	T. W.	
2	1097	23	15	23	5	..	4	9	4	9	6-6-11	99	15	0	0	12	9	125	4	M'gee.	
3	1098	23	15	23	5	..	3	8	3	8	6-6-11	99	15	0	0	10	0	159	9	"	
4	1/1099	23	15	23	5	..	2	0	2	0	6-6-11	99	15	0	0	5	6	290	7	"	
5	1101	64	18	64	18	..	5	18	5	18	9-6-11	200	0	0	0	1	0	193	9	T. W.	
6	1163	29	3	29	3	..	8	6	8	6	3-6-12	240	0	0	0	1	6	170	6	M'gee.	
7	1170	43	18	43	18	2	0	..	2	0	6-11-12	99	15	0	0	8	3	193	8	"	
8	1171	42	7	38	14	..	2	7	2	7	10-6-12	99	15	0	0	12	6	127	9	"	
9	1172	42	7	38	14	0	14	1	6	2	0	10-6-12	99	15	0	0	2	9	581	4	"
10	1173	42	7	38	14	..	2	14	2	14	10-6-12	99	15	0	0	7	9	206	3	"	
11	1174	42	7	38	14	1	10	..	1	10	10-6-12	99	15	0	0	8	3	193	8	"	
12	1175	42	7	38	14	2	0	..	*2	0	10-6-12	99	15	0	0	11	0	145	3	"	
13	1176	42	7	38	14	1	18	..	†1	18	10-6-12	99	15	0	0	11	0	145	3	"	

* This excludes 1 *kanal* 18 *marlas* of *shamilat* (common land) also mortgaged.

† This excludes 2 *kanals* of *shamilat* (common land) also mortgaged.

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Serial No.	Serial No. according to Mutation Register.	AREA MORTGAGED			Cultivated area owned by the mortgagor.	Total area owned by the mortgagor.	Ks. Ms.	Ks. Ms.	Ks. Ms.	Ks. Ms.	Date of mortgage	Amount of mortgage debt.	Land revenue assessed on mortgaged area.	Mortgage debt as multiple of land revenue.	Rent if the mortgagor cultivates.	Who cultivates if not mortgagor (M'gee = mortgagor, T.W. = tenant-at-will).
		Chahi.	Barani.	Total.												
35	1363	..	1 12	1 12	32 9	32 9	..	1 12	1 12	27-6-14	40 0 0	0 8 0	80-0	..	..	M'gee.
36	1365	..	3 3	3 3	94 7	94 7	..	3 3	3 3	3-7-14	18 0 0	0 9 3	31 1	..	..	"
37	1370	..	1 0	1 0	52 16	52 16	..	1 0	1 0	25-7-14	99 15 0	0 2 9	581-4	..	..	"
38	1371	..	0 10	0 10	52 16	52 16	..	0 10	0 10	25-7-14	40 0 0	0 1 6	426-6	..	..	"
39	1374	2 3	..	2 3	11 5	12 2	2 3	..	2 3	12-8-14	250 0 0	0 12 6	320-0	..	..	"
40	1378	1 14	..	1 14	46 2	46 2	1 14	..	1 14	29-7-14	200 0 0	0 9 9	328-2	..	..	"
41	1407	..	2 8	2 8	47 13	52 1	..	2 8	2 8	31-8-14	100 0 0	0 2 9	581-8	..	..	T. W.
42	1459	..	1 8	1 8	27 17	27 17	..	1 8	1 8	not given	80 0 0	0 8 3	155-1	..	..	M'gee
43	1461	..	2 7	2 7	11 5	12 2	..	2 7	2 7	11-6-15	85 0 0	N'l.	N'l.	..	..	"
44	1462	..	1 12	1 12	11 5	12 2	..	1 12	1 12	11-6-15	43 0 0	N'l.	N'l.	..	..	"
45	1463	1 5	..	*1 5	24 0	26 17	1 5	..	*1 5	11-6-15	99 15 0	0 7 0	228-4	..	..	"
46	1464	1 5	..	*1 5	24 0	26 17	1 5	..	*1 5	11-6-15	99 15 0	0 7 0	228-4	..	..	"
47	1465	1 8	..	1 8	24 0	26 17	1 8	..	1 8	11-6-15	99 15 0	0 8 0	119-8	..	..	"
48	1466	0 18	..	0 18	24 0	26 17	0 18	..	0 18	11-6-15	99 15 0	0 2 3	399 7	..	..	"
49	1470	..	1 0	1 0	85 14	89 16	..	1 0	1 0	24-6-15	12 7 9	0 2 9	72-6	..	..	T. W.

* This excludes 10 marlas of shamlat (common land) also mortgaged

PATTI IV.—QUADRENNIAL YEAR, 1919-20.

(All mortgages in this Patti, except No. 16, are with possession and all are until repayment of debt).

Serial No.	Serial No. according to Mutation Register.	Total area owned by the mortgagor.		Cultivated area owned by the mortgagor.		AREA MORTGAGED			Date of mortgage	Amount of mortgage debt.	Land revenue assessed on mortgaged area.		Mortgage debt as multiple of land revenue.	Rent if the mortgagor cultivates.	Who cultivates if not mortgagor. (M'gee = mortgagor, T. W. = tenant-at-will).						
		Ks.	Ms.	Ks.	Ms.	Chaha.	Barana.	Total			Rs.	a p.				Rs.	a p.				
1	3	81	2	68	16	4	7	4	12	8	19	22-7-16	200	0	0	3	0	0	66-6	..	M'gee.
2	4	81	2	68	16	2	19	3	10	6	9	4-9-16	200	0	0	1	10	9	119-6	..	"
3	9	68	11	65	3	..	..	7	8	7	8	25-5-16	300	0	0	2	11	0	111-6	..	"
4	10	101	0	88	15	4	9	4	5	8	14	11-8-16	400	0	0	3	0	0	133-3	..	T. W.
5	11	101	0	88	15	1	3	..	..	1	3	2-10-16	80	0	0	0	8	3	155-1	..	M'gee.
6	12	81	2	68	16	..	..	4	0	4	0	25-10-16	120	0	0	0	14	6	132-4	..	"
7	16	30	11	28	16	4	0	..	..	4	0	31-1-17	300	0	0	1	13	0	165-5	..	T. W.
8	28	81	2	68	16	1	13	..	..	1	13	28-3-17	40	0	0	0	12	0	53-3	..	M'gee.
9	30	62	2	59	7	1	2	..	..	1	2	6-6-17	11	0	0	0	8	0	22-0	..	"
10	35	41	14	37	16	3	4	2	14	5	18	12-6-17	700	0	0	2	11	3	258-9	..	Sub-tenant under T. W. M'gee.
11	42	25	16	21	12	2	5	2	5	24-6-17	140	0	0	1	2	6	121-0	..	T. W.
12	47	81	2	68	16	1	7	6	15	8	2	2-7-17	200	0	0	2	7	6	81-0	..	T. W.

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13	48	81	2	68	16	7	0	..	7	0	11-6-17	600	0	0	3	10	0	165 0	..	T. W.
14	49	28	13	26	12	2	12	..	2	12	10-7-17	200	0	0	1	5	6	148 8	.	"
15	50	23	19	23	16	3	12	..	3	12	14-7-17	225	0	0	1	14	0	133 3	1/2 Badat	..
16	51	60	19	59	10	12	14	1	5	13	25-3-17	500	0	0	6	15	3	71 9	Without possession: pays 6% interest on debt.	
17	52	44	0	41	19	5	4	..	5	4	16-8-17	250	0	0	2	11	0	93 0	..	T. W.
18	54	81	2	68	16	2	11	.	2	11	11-9-17	110	0	0	5	5	0	21 3	.	M'gee.
19	61	72	8	63	17	0	10	..	0	10	3-2-18	99	15	0	0	4	0	399 7	.	"
20	67	81	2	68	16	..	..	1	19	1	18-2-18	160	0	0	0	13	0	196 9	..	"
21	71	81	2	68	16	4	7	4	12	8	8-3-18	330	0	0	3	0	0	110 0	..	"
22	74	81	2	68	16	1	18	.	1	18	4-6-18	90	0	0	0	13	9	104 7	.	"
23	95	13	18	12	12	4	0	4	7	8	2-1-18	300	0	0	2	12	9	107 3	.	"
24	97	74	8	70	10	4	16	0	3	4	3-7-18	200	0	0	2	3	3	90 7	.	"
25	100	31	1	30	5	8	18	..	8	18	13-8-18	800	0	0	4	1	3	196 3	1/2 Badat	..
26	118	68	14	64	11	4	17	..	4	17	28-11-18	400	0	0	2	3	0	182 8	.	M'gee
27	119	47	11	44	6	3	0	..	*3	0	25-12-18	200	0	0	1	5	9	147 1	..	"
28	125	92	12	89	17	..	..	5	5	5	6-1-19	49	15	0	1	3	0	43 0	..	"
29	129	81	2	68	16	1	10	..	1	10	7-2-18	35	0	0	0	10	9	52 0	..	"
30	143	81	2	68	16	1	16	..	1	16	18-2-18	260	0	0	0	13	0	320 0	..	"
31	145	58	9	54	1	8	18	8	11-4-19	500	0	0	2	0	3	248 0	..	T. W.

* This excludes 3 *marlas* of *shamlat* (common land) also mortgaged.

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Serial No.	Serial No accord- ing to Mutation Register.	Cultivated areas owned by the mortgagor.			AREA MORTGAGED.			Date of mortgage.	Amount of mort- gage debt.	Land revenue as- sessed on mort- gaged area.	Mortgage debt as multiple of land revenue.	Rent if the mort- gagor cultivates.	Who cultivates if not mortgagor. (M'gee=mort- gagee; T.V.= tenant-at-will).
		Ks.	Ms.	Ks. Ms.	Chaks.	Barani.	Total.						
32	148	93	6	Ks. Ms. 87 16	1 1	..	1 1	9-5-19	Rs. a. p. 17 8 0	0 3 9	154-0	..	M'gee.
33	149	93	6	87 16	1 1	..	1 1	9-5-19	17 8 0	0 3 6	80-0	..	"
34	150	93	6	87 16	1 1	..	1 1	9-5-19	17 8 0	0 3 9	154 0	..	"
35	151	93	6	87 16	1 1	..	1 1	9-5-19	17 8 0	0 3 9	154 0	..	"
36	152	57	14	54 15	0 10	..	*0 11	9-5-19	21 8 0	0 5 6	62-5	..	"
37	153	57	14	54 15	..	0 19	0 19	9-5-19	17 0 0	0 3 6	77-7	..	"
38	154	57	14	54 15	0 10	0 10	1 0	9-5-19	21 8 0	0 5 3	65-5	..	"
39	155	57	14	54 15	..	0 19	0 19	9-5-19	21 0 0	0 3 6	96-0	..	"
40	156	57	14	54 15	0 10	0 10	1 0	9-5-19	21 8 0	0 5 3	65-5	..	"
41	157	57	14	54 15	..	0 19	0 19	9-5-19	21 0 0	0 3 6	96 0	..	"
42	160	59	1	57 7	1 9	.	1 9	3-6-19	130 0 0	0 10 6	198 0	Rs. 4/- per kanal for sugarcane.	
43	161	60	17	56 3	1 1	.	1 1	6-6-19	100 0 0	0 3 6	457 1	..	M'gee.
44	163	23	11	21 14	3 5	..	3 5	12-6-19	340 0 0	1 0 3	334-7	.	"
45	165	175	10	164 1	7 6	..	7 6	13-6-19	500 0 0	3 4 9	151-6	‡ Batas.	"

* This excludes 11 marlas of shamilat (common land) also mortgaged.

PATTI IV.—concluded.

Serial No.	Serial No. according to Mutation Register.	AREA MORTGAGED.			Date of mortgage.	Amount of mortgage debt.	Land revenue assessed on mortgaged area.			Mortgage debt as multiple of land revenue.	Rent if the mortgagor cultivates	Who cultivates if not mortgagor. (M'gee = mortgagor; T.W. = tenant-at-will).
		Total area owned by the mortgagor	Cultivated area owned by the mortgagor.	Chahi.			Barani.	Total.				
		Ks. Ms.	Ks Ms.	Ks. Ms.	Ks. Ms.	Ks. a. p.	Rs. a. p.	Rs. a. p.				
61	282	28 17	26 12	4 7	31-5-20	500 0 0	1 14 6	262-3	..	..	Sub-tenant under T.W	..
62	283	28 17	26 12	5 12	31-5-20	400 0 0	2 8 6	158 0	..	..	"	..
63	290	92 12	89 17	..	6-6-20	200 0 0	1 0 0	200 0	..	..	"	..
64	293	27 8	25 2	..	10-6-20	99 15 0	0 4 3	376-2	..	..	T. W	..
65	294	27 8	25 2	..	10-6-20	199 14 0	1 3 0	168-3	..	..	"	..
66	296	82 4	75 6	7 18	10-6-20	232 0 0	3 9 0	65-1	..	..	Sub-tenant under T.W	..
Total ..		..	..	210 8	..	17,163 3 0	129 12 3	132 2	..	..	..	..

PATTI V.—QUADRENNIAL YEAR, 1923-24.

(All mortgages in this Patti are with possession and until repayment of debt.

1	305	79 3	74 0	2 18	..	2 18	15-8-20	306 0 0	1 5 0	233-1	M'gee.
2	307	22 17	18 13	2 10	1 9	3 19*	18-9-20	100 0 0	1 7 3	68 9	"

*This excludes 2 kanals of shamlat (common land) also mortgaged.

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3	309	60 14	57 12	5 4	..	5 4	14-6-20	500 0 0	2 5 6	213-3	.	M'gee & T. W.
4	310	98 15	89 12	3 4	..	3 4	7-6-20	300 0 0	1 7 0	208-7	..	M'gee.
5	336	35 1	30 5	2 12	..	2 12	4-4-21	300 0 0	1 2 6	259 4	.	"
6	347	98 5	80 12	1 3	..	1 3	2-4-21	180 0 0	0 8 3	349-0		"
7	356	101 19	96 1	2 8	.	2 8	27-7-21	300 0 0	1 7 9	202 1	..	T. W.
8	375	98 5	89 12	3 4	.	3 4	7-6-21	600 0 0	1 7 0	417-3	..	"
9	386	98 5	89 12	3 0	..	3 0	3-1-22	300 0 0	1 6 6	213-3		"
10	391	57 17	53 2	3 15	..	3 15	7-3-22	200 0 0	1 11 0	118-5		"
11	393	26 13	25 0	1 4	..	*1 4	13-5-22	209 0 0	0 12 3	272 9		M'gee
12	395	68 11	65 13	..	7 7	7 7	23-5-22	400 0 0	16 0 6	24 9	.	"
13	396	68 9	64 1	2 2	..	2 2	24-5-22	200 0 0	0 15 3	109 8	..	"
14	397	39 1	35 15	2 9	..	2 9	30-5-22	300 0 0	1 1 3	278 2	..	T. W.
15	398	6 6	5 13	1 15		1 15	31-5-22	200 0 0	0 12 9	251-0	.	"
16	399	23 11	21 14	3 14	.	3 14	6-6-22	430 0 0	1 10 9	257 1		"
17	400	23 11	21 14	0 14	2 8	3 2	19-6-22	200 0 0	0 13 9	232-7		M'gee.
18	402	68 14	65 11	4 17	..	4 17	5-6-22	400 0 0	2 3 0	182 8		T. W.
19	403	28 17	27 1	4 7	..	4 7	11-7-22	500 0 0	1 15 6	233 9		"
20	405	36 3	32 14	..	5 17	5 17	13-7-22	300 0 0	1 5 3	22-5	..	"
21	406	19 11	17 14	0 12	..	0 12	24-7-22	60 0 0	0 4 3	225-6		"
22	407	51 1	47 2	2 5	..	2 5	30-5-22	200 0 0	1 0 3	177-9	.	"

*This excludes 10 marlas of *shamilat* (common land) also mortgaged.

PATTI V.—concluded.

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Serial No.	Serial No. according to Mutation Register.	Total area owned by the mortgagor		Cultivated area owned by the mortgagor.		AREA MORTGAGED.			Date of mortgage.	Amount of mortgage debt.		Land revenue assessed on mortgaged area.		Mortgage debt as multiple of land revenue.	Rent if the mortgagor cultivates.	Who cultivates if not mortgagor. (M'gee = mortgagor, L W = tenant-at-will)		
		Ks	Ms.	Ks.	Ms.	Chahi.	Barani.	Total.		Rs.	a.	p.	Rs.				a.	p.
23	410	33	16	31	17	6	9	6	9	31-5-22	500	0	0	2	14	3	172-9	T. W.
24	417	171	18	161	18	..	..	3	15	12-7-22	400	0	0	0	13	9	465-4	M'gee.
25	419	58	10	54	14	3	18	3	18	5-6-22	400	0	0	1	12	3	226-5	Rs. 20/- a year, chakota rent.
26	420	22	17	19	2	2	6	2	6	5-6-22	200	0	0	1	0	9	191-0	Rs. 10/- a year, chakota rent.
27	421	108	13	105	8	2	11	2	11	5-6-22	300	0	0	1	2	6	259-4	Rs. 12/8/- a year, chakota rent.
28	422	22	17	19	2	2	10	2	10	5-6-22	300	0	0	1	2	0	266-6	Rs. 12/8/- a year, chakota rent.
29	447	69	14	68	5	..	..	8	0	2-6-23	500	0	0	1	13	0	275-8	M'gee
30	451	70	12	65	3	7	18	7	18	9-6-23	600	0	0	3	5	0	168-4	"
31	455	36	1	35	13	2	1	2	1	16-9-23	200	0	0	0	14	3	224-5	1/2 Batai.
32	461	116	8	105	8	4	4	7	9	9-6-23	260	0	0	2	10	3	133-9	M'gee.
33	463	42	13	30	3	1	18	..	..	21-6-23	150	0	0	0	13	9	174-5	"
34	466	20	0	18	7	3	4	9	16	21-6-23	475	0	0	3	10	6	121-3	T. W.
35	467	22	13	21	7	2	0	..	..	1-8-23	150	0	0	0	14	6	162-4	"
36	468	17	3	15	17	..	..	2	14	6-7-23	99	15	0	0	9	9	164-0	"

37	469	17	3	15	17	..	1	13	1	13	6-7-23	99	15	0	0	6	0	206-5	..	T. W.
38	470	17	3	15	17	..	1	15	1	15	6-7-23	99	15	0	0	6	3	266-8	..	"
39	472	20	0	18	8	8 16	13	12	22	8	11-6-23	1,085	0	0	7	0	9	153-9	.	M'gee.*
40	483	23	2	21	4	6 14	..	..	6	14	18-1-24	300	0	0	2	13	9	104-9	.	T. W.
41	488	11	15	11	4	4 2	..	..	4	2	2-1-24	327	0	0	1	13	9	175-8	.	"
42	490	46	4	42	8	5 1	..	..	5	1	21-3-24	300	0	0	2	4	6	131-5	..	M'gee.
43	496	3	15	3	15	2 10	..	..	2	10	28-5-24	300	0	0	1	5	0	228-5	..	"
44	498	25	8	24	4	5 7	.	.	5	7	3-6-24	500	0	0	2	6	9	206-4	..	"
45	503	65	17	58	17	1 5	..	..	1	5	7-6-24	122	0	0	0	9	0	216-8	$\frac{1}{2}$ Bata.	..
46	504	30	11	28	16	2 1	.	.	2	1	7-6-24	150	0	0	0	14	9	164-4	Land re-venue only.	Sub-tenant under T. W.
47	506	30	11	28	16	4 0	.	.	4	0	7-6-24	450	0	0	1	13	0	248-2	Land re-venue only.	Sub-tenant under T. W.
48	507	22	17	19	2	1 8	2	0	3	8	9-6-24	250	0	0	1	1	3	231-8	Land re-venue only.	M'gee.
49	509	30	12	25	18	1 18	..	..	1	18	7-6-24	150	0	0	0	13	9	174-5	$\frac{1}{2}$ Bata.	..
50	510	10	1	9	15	4 0	..	..	4	0	17-6-24	300	0	0	1	13	0	165-5	Sub-tenant under T. W.	Sub-tenant under T. W.
51	511	70	12	65	3	12 6	4	2	16	8	18-6-24	1,100	0	0	6	7	9	169-6	Land re-venue only	Sub-tenant under T. W.
52	520	49	1	47	7	5 18	..	..	5	18	18-6-24	300	0	0	2	10	9	112-3	Land re-venue only	M'gee
53	418	121	7	115	4	..	7	7	7	7	12-7-22	600	0	0	1	10	6	362-7	..	M'gee
Total ..		..		..		166 18	79	4	246	2	..	17,453	13	0	87	8	3	199-4	..	

*The mortgagor mortgaged more than his share from the common holding without the knowledge of others

APPENDIX B

TABLE XXXIX—Statement showing the Number of Redemptions effected in Tehong from June 1913 to June 1924.

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No	Serial No in Mutation Register or revenue records.	Sources of redemption money	Who redeemed the land ?	Was other land sold or mortgaged to effect redemption ?	REMARKS (No case was found of automatic redemption at the expiry of a fixed period).
			PATTI MASANI.		
1	1207	Partly borrowed from the village Co-operative Society and partly saved from casual labour.	Grand-children of the mortgaging owner after his death.	No.	In practice where land is re-mortgaged the second mortgagee does not pay the mortgagor. He pays directly to the first mortgagee and a record of payment and receipt from both sides is entered in the deed ; if the mortgage is verbal, statements of the same description are made before the village <i>patwari</i> , who records them. The land in question is, however, recorded as redeemed from the first mortgagee by the mortgagor. The surplus money only, if there is any, is given to the mortgagor.
2	1362	Do.	Do.	No.	
3	123	Savings from cultivation and casual labour.	Do.	No.	
4	301	Income from land and savings from cultivation.	Mortgaging owner.	No.	
5	200	Re-mortgaging the same area and redeeming part of it.	Do	No.	
6	300	Income from cultivation.	Do	No.	
7	1413	Without payment	Do.	No.	
8	186 to 189	Sale of a house	Do.	No.	
11					
12	404	Further re-mortgaging a lesser area.	Do.	No.	
13	1533	Income from service, land, trade, and money-lending.	Successor to the property of the mortgaging owner.	No.	
14	1357 to 250	Income from cultivation in Bar.	Mortgaging owner.	No.	
15					
16	284	Borrowing from the Co-operative Society.	Do.	No.	

APPENDIX B.—*continued.*

No	Serial No in Mutation Register or revenue records	Sources of redemption money.	Who redeemed the land ?	Was other land sold or mortgaged to effect redemption ?	REMARKS. (No case was found of automatic redemption at the expiry of a fixed period).
			PATTI MASANI—continued		
17 18	{ 288 289	Sold and mortgaged other lands.	Mortgaging owner.	Sold and mortgaged other land	The mortgage debt was settled on the remainder of the area.
19 20	{ 171 172	Borrowing from relatives on the same interest as was charged by the Co-operative Society.	Son of the mortgaging owner after his death	No	
21	280	Re-mortgaging a lesser area.	Mortgaging owner.	No.	
22	314	Without payment .	Do. ..	No ..	
23	277	Sale of a daughter .	Do. ..	No.	
24	253	Partly borrowing and partly savings from cultivation.	Do	No.	
25	{ 495 505	Re-mortgaging the same area but getting more money.	Do. .	No.	
26	1460	Re-mortgaging the same area plus a further area and getting more than was necessary for the redemption.	Do .	No.	
27 28	{ 1514 1516	The mortgaging owner died leaving the mortgagees to succeed to his property ; hence the redemption			
29	449	Re-mortgaging the same area for a larger sum.	Mortgaging owner.	No.	
30	450	Without payment ..	Do.	No. ..	The mortgage debt was settled on the remainder of the area.
31	273	Re-mortgaging the same area for a larger sum.	Do. ..	No.	
32	1230	Selling cattle and giving up cultivation.	Son of the mortgaging owner after his death.	No	

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APPENDIX B.—*continued.*VIII.
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No.	Serial No. in Mutation Register or revenue records.	Sources of redemption money.	Who redeemed the land?	Was other land sold or mortgaged to effect redemption?	REMARKS. (No case was found of automatic redemption at the expiry of a fixed period).
			PATTI MASANI— <i>continued.</i>		
33	53	Income from service.	Son of the mortgaging owner after his death.	No.	The area was purchased while under mortgage. The money was paid off to the mortgagee by the vendee and the redemption was recorded as carried out by the vendee.
34	313			No.	
35	1212	Re-mortgaging the same area for a larger sum.	Mortgaging owner	No.	
36	464	Re-mortgaging a lesser area.	Do	No	
37	471	Selling other land	Do.	Sold other land.	
38	1469	Income from cultivation.	Successors of the mortgaging owner.	No.	
39	1471			No.	
40	1473			No.	
41	401	Do.	Mortgaging owner	No.	
42	124	Do	Do.	No.	
43	1500	Income from trade and money-lending.	Purchaser of the mortgaged area.	No.	
44	460	Re-mortgaging a lesser area.	Mortgaging owner	No.	
45	164	Do.	Sons of the mortgaging owner after his death.	No.	
46	1596	Saving from service	Do.	No.	
47	1554	Income from cultivation in Bar.	Successor to the property of the mortgaging owner.	No.	
48	1209	Without payment	Do.	No.	The mortgage debt was settled on the remainder of the area.

APPENDIX B.—*continued.*

No.	Serial No. in Mutation Register or revenue records.	Sources of redemption money.	Who redeemed the land ?	Was other land sold or mortgaged to effect redemption?	REMARKS (No case was found of automatic redemption at the expiry of a fixed period).	VIII. App. B.
49	304	Re-mortgaging a lesser area.	PATTI MASANI— <i>concluded</i> Mortgaging owner	No.		
50	60	Saving from casual labour.	Sons of the mortgaging owner after his death.	No.		
51	1556	The mortgaging owner died leaving the mortgagee to succeed to his property, hence the redemption				
52	1534	Without payment	Mortgaging owner	No.	The mortgage debt was settled on the remainder of the area	
53	462	Savings from service and cultivation.	Mortgaging owner	No.		
54	1211	Re-mortgaging a lesser area.	Do.	No.		
55	162	Income from cultivation.	Do.	No.		
56	299	Do.	Successors to the mortgaging owner.	No		
57	1351	Without payment	Mortgaging owner	No.	The mortgage debt was settled on the remainder of the area	
58	34	Borrowing	Do.	No.		
59	1376	Re-mortgaging a lesser area.	Do.	No.		
60	1348	Without payment	Do.	No.	The mortgage debt was settled on the remainder of the area.	
61	1244	Re-mortgaging a lesser area.	Do.	No.		
62 63	{ 1597 24	Income from cultivation in Bar.	Do.	No		

APPENDIX B—continued.

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No	Serial No. in Mutation Register or revenue records.	Sources of redemption money	Who redeemed the land ?	Was other land sold or mortgaged to effect redemption ?	REMARKS (No case was found of automatic redemption at the expiry of a fixed period).
			PATTI HANSIAN.		
64	260	Mortgaging other land	Mortgaging owner	Mortgaged other land	
65	169	Re-mortgaging the same area for the same amount	Do	No.	Transferred the mortgage from a distant to a near relative
66	219	Re-mortgaging the same area for a larger sum.	Do.	No	
67	116	Partly savings from casual labour, and partly borrowed from the Co-operative Society.	Do.	No.	
68	308	Re-mortgaging the same area for a larger sum.	Do	No.	
69	413	Re-mortgaging a lesser area	Do	No.	
70	1496	Transferring the mortgage from a distant to a near relative	Do.	No.	
71	352	Re-mortgaging the same area for increased money.	Do.	No.	
72	1488	Income from cultivation	Nephews and successors to the mortgaging uncle.	No.	
73	246	Re-mortgaging the same area for the same amount.	Mortgaging owner.	No.	
74	1373	Sale of a daughter ..	Do.	No.	
75	275	Re-mortgaging the same area for a larger sum.	Do.	No.	
76	1210	Income from cultivation in <i>Bar</i> .	Sons of the mortgaging owner after his death.	No.	
77	1364	Income from cultivation in <i>Bar</i> .	Do.	No.	
78 79	{ 1367 1368	Income from land and money-lending.	Purchaser of the mortgaged area	No	

APPENDIX B.—concluded

No.	Serial No. in Mutation Register or revenue records.	Sources of redemption money.	Who redeemed the land ?	Was other land sold or mortgaged to effect redemption ?	REMARKS. (No case was found of automatic redemption at the expiry of a fixed period).
			PATTI HANSIAN—concluded		
80	1495	Income from cultivation in Bar	Mortgaging owner	No	The mortgage debt was settled on the remainder of the area
81	{ 366 367 368 369	Income from land and money-lending.	Purchasers of the mortgaged area.	No	
82					
83					
84					
85	{ 315	Income from cultivation.	Mortgaging owner	No	
86	245				
87	271	Without payment	Do ..	No	
88	292	Savings from casual labour.	Do. .	No	
89	590	Income from cultivation.	Do. ..	No.	
90	{ 348 17	Income from land ..	Do. ..	No.	
91					
92	{ 33	Income from service.	Do. ..	No.	
93	1371				
94	{ 66	Re-mortgaging the same area for a larger sum.	Do. ..	No.	
95	142				
96	242	Income from cultivation.	Purchaser of the mortgaged area	No.	
97	252	Mortgaging another area.	Mortgaging owner	Mortgaged another plot	
98	70	Selling other land ..	Do. ..	Sold other land.	
99	73	Mortgaging another area.	Do. ..	Mortgaged other land.	
100	211	Re-mortgaging the same area for a larger sum.	Do. ..	No.	
101	{ 481 252	Re-mortgaging other plots and getting more money.	Do. ..	No.	
102					
103	271	Income from cultivation.	Purchaser of the mortgaged area.	No.	
104	{ 134	Selling a portion of the mortgaged area.	Mortgaging owner	No.	
105	135				
106	370	Re-mortgaging the same and mortgaging a further area.	Do. ..	No.	
107	{ 482 436 372 253	Re-mortgaging the same area for a larger sum.	Do. ..	No.	
108					
109					
110					

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APPENDIX C.

TABLE XL.—*Statement giving Details of every Mortgage made in Tehong in the last 11 Years.*

VIII. App. C	No.	Serial No. in Mutation Register.	Reason for contraction of mortgage.	How mortgage money was spent.	Causes of debt where mortgage consideration was extinction of debt.	Was mortgage by one or all of the shareholders ?
	1	290	Redemption of another mortgage.	Redeemed other land under mortgage	..	By all shareholders.
	2	1207	Do. ..	Do. .		By the only owner.
	3	1363	Transference of the mortgage from a distant to a near relative.			By one of the shareholders.
	4	244	Extinction of debt .	Repaid the debts.	Purchase of cattle.	By the only owner
	5	100	(a). Litigation over succession to landed property.	On litigation. ..	..	By one of the shareholders.
			(b). Commencing cultivation in Canal Colonies.	Began cultivation in the Canal Colonies.		
			(c). Extinction of debt to the Co-operative Society.	Repaid the debts	Litigation	
	6	1494	Purchase of land in another village.	Purchased land..	..	By one of the shareholders
	7	236	Do. .	Do. ..	..	By the only owner.
	8	410	Commencing cultivation in the Canal Colonies.	(a). Purchased oxen. (b). Purchased 2 gaddas. (c). Miscellaneous expenditure.	..	By all the shareholders
	9	1361	Extinction of debt	Repaid the debts	Purchase of plough cattle.	Do.
	10	467	Do. ..	Do. ..	Do	By the only owner.
	11	422	Do. ..	Do. .	(a). Purchase of an ox. (b). Marriage of a daughter.	By one of the shareholders.

APPENDIX C.—continued.

No	Serial No in Mutation Register.	Reason for contraction of mortgage	How mortgage money was spent	Causes of debt where mortgage consideration was extinction of debt.	Was mortgage by one or all of the shareholders?	VIII. App. C.
12	507	Extinction of debt .	Repaid the debts	(a) Purchase of plough cattle (b). Purchase of food grains in times of scarcity.	By the only owner.	
13	420	Do .	Do ..	(a) Purchase of a <i>gadda</i> (b) Purchase of a cane-pressing mill (c). Redemption of a mortgage.	By one of the shareholders.	
14	405	Redemption of the land previously mortgaged.	The second mortgagee paid directly to the first.		By the only owner.	
15	97	Litigation under section 498, Indian Penal Code.	On litigation ..	..	By one of the shareholders.	
16	1356	Extinction of debt ..	..	Purchase of oxen ; later the borrower mortgaged the land to his creditor.	By the only owner.	
17	1459	Marriage .	Purchase of a wife.		By one of the shareholders.	
18	1407	(a). Litigation ..	(a). On litigation	Purchase of two plough cattle.	By the only owner.	
19	1576	(b). Extinction of inherited debt.	(b). Repaid the debts.			
20	1250	Extinction of debt .	Repaid the debts	Purchase of plough cattle.	By some of the shareholders.	
21	356	Repayment of debt to the Co-operative Society.	Do. .	Purchase of two plough cattle and one cow-buffalo	By all the shareholders.	
22	180	Purchase of land ..	Purchased land	.	Do.	
23	461	Redemption of a portion of the land mortgaged.	The second mortgagee paid directly to the first.	..	By the only owner.	

APPENDIX C.—*continued.*VIII.
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No.	Serial No. in Mutation Register.	Reason for contraction of mortgage	How mortgage money was spent.	Causes of debt where mortgage consideration was extinction of debt.	Was mortgage by one or all of the shareholders ?
24	165	Redemption of another mortgage.	Another mortgage was redeemed.	.	By all the shareholders.
25	51	Extinction of debt..	Repaid the debts	(a). Purchase of two plough oxen. (b). Purchase of a cow-buffalo. c). Marriage of a daughter.	By the only owner.
26	71	Son's marriage. ..	Married his son		Do.
27	281	(a). Extinction of debt (b) To provide money for commencing cultivation in Bar.	(a). Repaid the debt. (b) Left for Bar to begin cultivation there.	Purchase of two plough oxen.	By all the shareholders.
28	145	Extinction of debt ..	Repaid the debts	Litigation under section 498, I. P. C.*	By one of the shareholders.
29	498	Do.	..	Mortgage made in lieu of a debt contracted for son's marriage.	By the only owner.
30	305	Redemption of a portion of the land mortgaged.	The second mortgagee paid directly to the first.	.	Do.
31	421	Extinction of debt .	Repaid the debts	Marriage of a grand son.	Do.
32	1238	Redemption of a portion of the land mortgaged.	The second mortgagee repaid directly to the first.	.	By one of the shareholders
33	1239				
34	1240				
35	50	Extinction of debt ..	Repaid the debts	Litigation in connection with succession to landed property.	Do.
36	1525	(a) Extinction of debt. (b). To provide means of leaving for Bar and beginning cultivation on two squares granted there.	..	Purchase of oxen.	By all the shareholders.

APPENDIX C.—*continued.*

No.	Serial No in Mutation Register.	Reason for contraction of mortgage.	How mortgage money was spent.	Causes of debt where mortgage consideration was extinction of debt.	Was mortgage by one or all of the shareholders?
37	1375	Redemption of part of the land mortgaged	The second mortgagee paid directly to the first.	.	By the only owner
38 39	{ 282 283	Redemption of another mortgage.	The second mortgagee paid directly to the first: the excess was received by the mortgagor who purchased food-stuffs with it.		Do
40	278	Transference of mortgage from a distant to a near relative.			Do
41	160	Extinction of debt	Repaid the debts.	Marriage	Do.
42 43	{ 1370 1371	Do ..	Do. ..	Do.	By one of the shareholders
44	512	Do .	Do	Purchase of oxen.	By the only owner.
45	455	Do. .	Do	(a) Marriage of a son (b). Purchase of a <i>gadda</i> .	Do.
46 47	{ 504 506	Redemption of the area mortgaged and getting a larger sum.	The excess money was spent on the marriage of two children.	.	Do
48	16	Do. ..	Do.		By one of the shareholders.
49 50	{ 1461 1462	Redemption of another mortgage.	Redeemed another mortgage.	..	Do.
51 to 60	{ 148 to 157	These are cases of mortgages as well as redemptions. The mortgagor died leaving the mortgagees to succeed to his property jointly in different shares. The mortgages were thus extinguished.			
61 to 64 65	{ 1463 to 1466 163	Extinction of debt	Repaid the debts	Purchase of a wife.	By one of the shareholders in each case.
		Do ..	Do.	Litigation under section 498, Indian Penal Code.	Do.

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APPENDIX C—*continued*VIII.
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No.	Serial No in Mutation Register.	Reason for contraction of mortgage.	How mortgage money was spent.	Causes of debt where mortgage consideration was extinction of debt.	Was mortgage by one or all of the shareholders?
66	406	Purchase of an ox	Purchased an ox	..	By one of the shareholders.
67	{ 293 294	Extinction of debt .	Repaid the debts	Purchase of oxen.	By all the shareholders.
68					
69	{ 1477 1478 1479	Do	Do ..	Assisting brother to go to Australia.	By one of the shareholders.
70					
71					
72	296	Do	Do. ..	Purchase of oxen.	By all the shareholders
73	511	Do. .	Do ..	Expenditure on 5 marriages	Do.
74	274	Re-mortgaged the area for a larger sum.	The excess money after redemption from the first mortgagee was spent in purchasing oxen.	.	By one of the shareholders.
75	451	Redemption of part of the mortgaged area by further mortgage.	..	.	By all the shareholders.
76	1229	Purchase of a wife..	Purchase of a wife.		By the only owner.
77	1213	Re-mortgaging the area with another for more money.	The excess money after redemption from the first mortgagee was spent on a marriage.		By one of the shareholders.
78	1231	Extinction of debt .	Repaid the debts	Purchase of oxen.	Do.
79	466	Do. ..	Do. .	Do. .	By the only owner.
80	472	Redemption of another mortgage.	Redeemed another mortgage.	.	Do.
81	393	Extinction of debt..	Repaid the debts	(a). Purchase of an ox. (b). Marriage.	Do
82	1470	Litigation. ..	On litigation ..		Do.

APPENDIX C—continued.

No	Serial No. in Mutation Register	Reason for contraction of mortgage.	How mortgage money was spent.	Causes of debt where mortgage consideration was extinction of debt.	Was mortgage by one or all of the shareholders?
83 84	{ 1472 1474	Similar to Serial Nos. 51 to 60 above			
85 86 87	{ 1480 1481 1482	Extinction of debt .	Repaid the debts	Litigation	By all the shareholders in each case.
88	237	Extinction of debt .	Do	Purchase of oxen on commencing cultivation	By the only owner
89	118	Do ..	Do	Purchase of oxen	Do.
90	422	Had taken land in mortgage	.		By one of the shareholders.
91	479	Redemption of another mortgage	Redeemed another mortgage. The money in excess was used to repay debts to the Co-operative Society.	Purchase of an ox by borrowing from the Co-operative Society.	Do.
92	463	Marriage.	On marriage ..		By the only owner.
93	61	Extinction of debt	Repaid the debts	Purchase of food grains and other necessaries.	Do
94	9	Do .	Do ..	Purchase of oxen.	By one of the shareholders
95	59	Do. ..	Do. ..	Do. .	Do.
96	173	Do ..	Do. ..	(a). Purchase of an ox. (b). Nephew's marriage.	Do.
97	168	Do	Do. ..	(a) Purchase of food grains. (b). Marriage	By all the shareholders.
98	161	Do. .	Do. .	Marriage ..	By the only owner.
99	42	Taking land on mortgage	Took land on mortgage.	..	By all the shareholders.

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C.

APPENDIX C.—*continued.*

VIII. App. C.	No.	Serial No in Mutation Register	Reason for contraction of mortgage	How mortgage money was spent	Causes of debt where mortgage consideration was extinction of debt.	Was mortgage by one or all of the shareholders?
	100 101	{ 179 307	Commencing cultivation in another village.	Purchase of oxen for cultivation work in another village.	..	By the only owner.
	102	391	Extinction of debts	Repaid the debts	(a) Purchase of oxen (b). Building a mosque. Purchase of oxen.	Do.
	103	49	Do	Do.	Purchase of oxen.	Do.
	104	170	Transference of mortgage from a distant to a near relative.		.	By one of the shareholders.
	105	336	Re-mortgaging the area for a larger sum.	The excess money after redemption was used to purchase oxen.		Do
	106	407	Marriage	On marriage ..		By the only owner.
	107	397	Commencing cultivation on a square of land granted in the Canal Colonies.	Purchase of oxen for cultivation work in Canal Colonies.	..	Do.
	108	396	Extinction of debt	Repaid the debts	Purchase of food grains, etc.	Do.
	109	510	Do.	Do.	Purchase of oxen.	By all the shareholders
	110	509	Do.	Do	Purchase of food grains and clothes	By the only owner.
	111 112	{ 503 498	Do.	Do.	Children's marriages	Do.
	113	483	Do.	Do.	(a). Purchase of oxen. (b). Sinking a well.	Do
	114	490	Do	Do.	Purchase of oxen and implements on commencing cultivation.	By all the shareholders.

APPENDIX C.—*continued*

No.	Serial No. in Mutation Register.	Reason for contraction of mortgage	How mortgage money was spent.	Causes of debt where mortgage consideration was extinction of debt.	Was mortgage by one or all of the shareholders?
115	52	Extinction of debt..	Repaid the debts	Purchase of oxen and implements	By one of the shareholders.
116	309	Re-mortgaging the area for a larger sum.	The excess after redemption from the first mortgagee was spent in purchasing oxen	.	Do.
117	{ 417	Redemption of part of land by re-mortgaging	Redeemed part of the land	..	By all the shareholders
118	{ 418				
119	{ 468	Do	Do ..		By the only owner.
120	{ 469				
121	{ 470				
122	1546	Extinction of debt	Repaid the debts	Purchase of clothes and other necessities	Do
123	1498	Do	Do .	Sinking a well	By one of the shareholders
124	166	Do.	Do ..	Purchase of oxen	Do
125	395	Do.	Do. .	Do	By the only owner.
126	1492	Do	Do .	Purchase of goats	By only some of the shareholders
127	1491	Do ..	Do. ..	Purchase of oxen and implements.	Do.
128	1489	Similar to Serial Nos.	51 to 60	.	By all the shareholders.
129	1495	Transference of a mortgage from a distant to a near relative.	..	.	By the only owner
130	{ 1346	Extinction of debt ..	Repaid the debts	Purchase of a gadda and a cane-pressing mill.	By one of the shareholders.
131	{ 1347				
132	1559	Commencing cultivation.	Purchased oxen and implements.	..	Do.
133	{ 1374	Re-mortgaging for more money	The excess money after redemption from the first mortgagee was used to buy clothes.	.	Do.
134	{ 1516				

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APPENDIX C.—concluded.

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C

No.	Serial No. in Mutation Register.	Reason for contraction of mortgage	How mortgage money was spent.	Causes of debt where mortgage consideration was extinction of debt.	Was mortgage by one or all of the shareholders?
135 136 137	{ 174 176 119	Re-mortgaging for more money.	The excess money after redemption from the first mortgagee was used to buy clothes		By one of the shareholders.
138 139	{ 1359 1360	Extinction of debt	Repaid the debts	Purchase of oxen.	Do
140	1365	Do	Do	Gambling and drinking.	By the only owner
141	1483	To provide means for starting cultivation on a square granted in the Canal Colonies.	Commenced cultivation in <i>Bar</i>	..	By all the shareholders
142	496	It is a case of redemption as well as mortgage. Out of several co-shares, one gets the whole mortgage redeemed and becomes the mortgagee of the shares of others who become mortgagors under him			
143 144 145 146 147 148 149 150 151 152	{ 1509 12 4 3 54 48 47 24 71 254	Extinction of debts	Repaid the debts	Drinking, polygamy, feasts to friends, etc.	By the only owner in each case.
153 154 155 156 157	{ 143 129 28 67 74	Re-mortgaging for more money.	The excess money after redemption from the first mortgagee was spent in drinking, and polygamy.	.	Do.
158 159 160	{ 310 386 247	Litigation	On litigation ..	..	Do.
161 162 163 164	{ 10 11 375 347	Re-mortgaging for more money.	The excess money after redemption from the first mortgagee was spent on litigation	.	Do.
165	1271	Payment of <i>chakota</i> rents.	Crops failed and <i>chakota</i> was paid off.	.	By one of the shareholders.
166	35	(a). Marriage (b). Purchase of oxen. (c). Purchase of a cow-buffalo.	On items mentioned.	.	Do

CHAPTER IX.

SALES

1. A statement giving details of the sales of land made in each IX. 1. quadrennial period is given below.

TABLE XLI.—*Statement giving Details of Sales of Land made in Tehong in each Quadrennial Period from 1899-1900 to 1923-24.*

Year of Quadrennial <i>Jamabandi</i> .	No. of sales made in the previous quadrennium	AREA SOLD.		Sale price.	Average sale value per acre.	Average sale price per acre cultivated.	Land revenue assessed on area sold.	Sale price as multiple of land revenue.
		Total	Cultivated.					
1	2	3	4	5	6	7	8	9
		Acres.	Acres.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
1899-1900	11	15·893	15 175	3,434 8 0	216 1 6	226 5 3	6 6 9	534·8
1903-1904	8	4 231	3 900	936 0 0	221 3 5	240 0 0	11 0 0	85·0
1907-1908	9	12 950	12 950	4,030 13 0	311 4 2	311 4 2	34 11 9	116·0
1911-1912	14	7 000	6·894	4,467 0 0	633 0 11	647 15 8	16 8 4	269·0
1915-1916	10	1 912	1 556	2,119 15 0 <i>1,919 15 0</i>	1,003 14 9	1,234 0 11	3 6 6	563 6
1919-1920	24	8·181	7 575	8,623 10 0 <i>7,373 10 0</i>	901 3 9	973 6 8	24 13 0	297·0
1923-1924	13	7 425	6 575	9,690 0 0 <i>8,440 0 0</i>	1,136 11 3	1,283 10 5	23 14 9	352·8

Note—Entries made in italics in column 5 show the actual prices received and the other figures give the sale price recorded in Statement No 5 of the Village Note Book or in the sale deed; the entries in columns 6, 7 and 9 are made on the basis of actuals, and not on the sale price as recorded.

IX. 2. 2. Below is given a statement showing for each quadrennial period the sales made in the village as between agriculturists and non-agriculturists.

TABLE XLII—*Statement classifying Sales of Land made in Tehong for each Quadrennial Period from 1899-1900 to 1923-24.*

	1899-00	1903-04	1907-08	1911-12.	1915-16	1919-20	1923-24
By AGRICULTURISTS—							
(a). to <i>zemindars</i> of the village . . .	6	6	8	8	6	23	12
(b). to <i>zemindars</i> of other places . . .	2	1	1	3	2	..	.
(c). to money-lenders other than those of agricultural tribes ..	3	1	.	..	.	..	.
(d). to others ..	..	..	..	..	1	.	..
By NON-AGRICULTURISTS—							
(a). to <i>zemindars</i> of the village ..	..	.	.	3	1	1	.
(b). to <i>zemindars</i> of other places .	.	..	..	..	..	.	1
(c). to money-lenders other than those of agricultural tribes .	..	.	..	..	..	.	..
(d). to others ..	..	..	..	..	..	..	..
<i>Total</i> ..	11	8	9	14	10	24	13

None of the transactions recorded above is *benami*. Where an assertion of the right of pre-emption, or an attempt on the part of the vendor's successors to prove the sale unnecessary and invalid is anticipated by the vendee, the latter gets the sale deed written in such a way as to suggest valid reasons for the sale, and he also mentions as sale price a sum in excess of that actually paid. As the money is to be paid before the sub-registrar, it is paid in full before him, but the excess arranged previously is taken back as soon as the vendor is out of the office. The vendor sometimes refuses to repay this excess. To avoid this, clever vendees get the sale embodied in two deeds instead of in one. The sale price mentioned in one deed is paid before the sub-registrar; after it is recorded by him both the parties come out of the office and the vendee takes back the excess sum from the vendor, and then the second part of the sale deed is taken before the sub-registrar and the amount mentioned therein is paid before him.

3. In the two *pattis* of the village to which alone investigation regarding IX. 3. sales and mortgages has been confined, only three persons, who did not own land previously, have purchased land during the last 20 years. All these are *Arain* by caste. At the time of purchase only one of them was cultivating as a tenant-at-will: the others were labourers.

4. (a). The following are instances of persons cultivating five acres IX. 4 and less who have lost land by sale in the last 20 years:—

Owner.	Remarks.
1. M. son of A.	.. He has lost almost all his land by sale and is now a tenant cultivator. No <i>Arain</i> of his caste would give him a daughter in marriage and he had to purchase a <i>faqir</i> woman. He finds it difficult to obtain credit.
2. A., „ K	He now cultivates as a tenant in a neighbouring village.
3. D., „ K.	.. He now depends on his earnings as labourer and resides at Phillour.
4. F. and B. D.	.. They gave up cultivation and now depend on their wages as labourers.
5. A., son of M.	.. He left for the Canal Colonies where he now cultivates as a tenant
6. N. & N., sons of J.	.. They began to work in the Railway Loco-shop at Lahore and are each earning Rs. 2/- a day.
7. N., son of G.	. He is old and childless.
8. M., „ K.	.. He left for the Canal Colonies where he now cultivates.
9. R., „ L.	.. He cultivates here as a tenant over and above what he owns, but finds difficulty in obtaining credit. He also plies a cart for hire
"10. B. M.	.. He was a <i>Bania</i> by caste, but by his vices lost all his property, and his children left for other places where they are shopkeepers.
11. N., son of J.	.. He cultivates as a tenant apart from what he owns, just as he used to do before he reduced his holding by sale.

<i>Owner.</i>	<i>Remarks.</i>
IX. 4. 12. A., son of S	.. He cultivates as a tenant over and above what he owns, but he feels dissatisfied and wishes to have a tenancy in the Canal Colonies
13. N. & G, sons of H	.. One has acquired land in Nawashahr <i>Tahsil</i> through some relative and lives there. The other cultivates as a tenant here in addition to the land which he owns.
14. M. B., son of B.	.. He cultivates as a tenant in Ludhiana District
15. M., „ D.	.. He died childless
16. H., „ S.	.. He died Of his sons, one is in Australia, the other is in railway service
17 F., „ A	.. He cultivates as a tenant in Ludhiana District.
18. M., „ U.	.. He died childless.
19. N. & F., sons of M.	.. They cultivate as tenants in the Canal Colonies.
20. Sh., son of K.	.. He depends on income from labour.
21. N., „ H	.. Dead ; his sons cultivate in the Canal Colonies.
22. H. & F., sons of S.	.. They cultivate in Ludhiana District where, they have acquired land through some relative.

(b). The effect of increasing their holdings on owners of more than five acres of cultivated land at the time of purchase during the past 20 years is now shown :—

<i>Owner.</i>	<i>Remarks.</i>
1. M., son of J.	.. He has died. One of his sons cultivates here as tenant and owner ; the rest cultivate as tenants in the Canal Colonies.
2. G. & K., sons of A.	.. They cultivate as tenants in a neighbouring village.
3. W., son of S.	.. He cultivates here as a tenant in addition to the land which he owns.
4. I., „ S.	.. He depends on income from labour.
5. U. D., „ K.	.. Do.

<i>Owner.</i>	<i>Remarks.</i>
6. N., son of N.	.. He is a good cultivator, and takes land also IX. 4. as a tenant.
7. A., „ L.	.. Do.
8. B., „ M.	.. He used to cultivate, but is old now; his son depends on casual labour.
9. N., „ K.	.. He depends on income from labour.
10. M., „ P.	.. He is a good cultivator who takes land also on rent.
11. B., „ U., .. } F., „ C. .. }	Do.
12. M., „ L.	.. Do.
13. N. & K. B., sons of A.B	.. Do.
14. B. & D., sons of U.	.. Do.
15. D. & R., sons of L., S., son of A.	.. } They used to cultivate in the Canal Colonies but now live here and cultivate as tenants over and above the land they own.
16. F. M. & N., sons of A. B.	.. Both of them are still in service.
17. C., son of A.	.. He works as a mason and has never been a cultivator.
18. C., „ M.	.. He keeps good oxen and is a good cultivator who is a tenant as well as owner.
19. N., „ N.	.. He has died. His sons are still minors.
20. G., „ B.	.. He is a good cultivator, and keeps good oxen. He takes land on rent also.
21. A., „ K.	.. He is a good cultivator and takes land on rent.
22. N. D., „ N.	.. Do.
23. S., J. & N., sons of F.	.. All of them cultivate as tenants over and above what they own.
24. M., son of B.	.. He sold off most of his land in order to begin cultivation in the Canal Colonies. Now he has purchased land here again, although he still cultivates in the Canal Colonies.

IX. 4. Agriculturist owners are not rigidly confined in all cases to their ancestral profession of cultivation, although it is their only resort when other means of livelihood fail. The loss of land through sale is felt very much in the case of small owners, who dislike being forced to cultivate as tenants. Reduction in small owners' holdings leads them to adopt callings other than cultivation. It is regarded as disheartening to receive only half the produce after much toil and labour. To cultivate as tenants in the Canal Colonies is preferred because of the irrigation facilities.

Any reduction or increase by sale or purchase in the land of a small owner in particular is liable to affect his credit. Cultivation with one plough (2 plough cattle) or 2 ploughs (4 plough cattle) varies with the number of family workers. Ordinarily, a cultivating family with one plough cultivates 5 to 7 acres of land, (both *chahi* and *barani*), and one with 2 ploughs cultivates from 8 to 12 acres of land or even more. No case was found of a cultivating small owner falling back to cultivation with one plough from that of two ploughs, after he had increased his holding from less than 5 acres to 5 acres or more.

IX 5. 5. Details are given in the following table in the case of 10 sales of land made during the past five years, from June 1919 to June 1924.

TABLE XLIII.—*Showing Details of Ten Sales of Land made in Tehong during the past Five Years.*

No.	Serial No. according to Mutation Re- gister.	Date of sale.	Causes of sale.
1	363	1-6-21	The surplus money after extinction of mortgage debts was expended in purchasing food grains, clothes, etc.
2	364	1-6-21	
3	428	9-12-22	Extinction of debts which had been contracted for purchasing cattle.
4	408	31-5-22	
5	427	9-12-22	Redemption of mortgages.
6	409	31-5-22	
7	412	31-5-22	After extinction of mortgage debts, the surplus was utilised in taking land on mortgage.
8	494	5-3-24	
9	239	20-1-20	Extinction of debts which had been contracted for purchasing plough cattle.
10	251	28-1-20	
			Taking land on mortgage.

6. Information about each sale that has been made during the past IX 6. eleven years, from June 1913 to June 1924, is now given —

TABLE XLIV.—*Showing Causes of All Sales of Land in Tehong for the past Eleven Years*

No	Serial No. according to Mutation Register.	Causes of sale.
1	287	Redemption of a mortgage.
2	311	Purchase of a wife as well as expenses on gaudy clothes and other presents for her.
3	465	Redemption of a mortgage.
4	392	Trade.
5	1352	To facilitate exchange and avoid a fragmented holding*. The money received by sale was spent in purchasing an ox.
6	1409	Marriage ceremonies and purchase of oxen.
7	209	Redemption of a mortgage.
8	329	The same case as 209 above. A pre-emption suit enabled a close relative of the vendor to assert his right of purchase first; hence the reason for the sale having been recorded a second time.
9	126	} Extinction of debts which had been contracted for the purchase of oxen.
10	127	
11	167	
12	291	For a marriage.
13	158	Taking land on mortgage.
14	363	} At the time of sale the land was under mortgage. Redemption was effected by the vendee and the surplus money was given to the vendor, who spent it in purchasing necessities such as food grains and clothes.
15	364	
16	201	} Extinction of debts which had been contracted for purchasing oxen.
17	55	
18	428	

(Continued.)

* As a matter of fact there occurred an exchange of plots. One plot being larger than the other by 7 *marlas*, the parties decided to pay and receive the price of the fragment in excess. As the owner of the larger plot had no other land in this neighbourhood he consented to sell the 7 *marlas*, rather than keep the land as a fragment.

(Concluded.)

IX. 6. No.	Serial No. according to Mutation Register.	Causes of sale.
19 20	427 408	} Redemption of mortgages.
21 22 23 24	1469 1475 409 412	
25	29	Extinction of debt which had been contracted in purchasing food grains, and clothes.
26	1290	Extinction of debts which had been contracted in drinking, gambling and similar pursuits.
27 28	494 239	} Extinction of a debt which had been contracted for purchasing plough cattle.
29	251	
30	94	Trade.
31	210	} The mortgaged area was sold. The surplus money after repayment of mortgage debt was spent in drinking and other pursuits.
32	243	
33 34 35 36 37 38	62 72 144 139 96 190	} Redemption of mortgages. The surplus was spent in drinking, and giving feasts to friends.
39	203	
40	175	
41	136	
42	437	

Out of 41 sales made during the last 11 years, (for one sale, No. 8, mentioned above, is counted twice), 15 have been made to redeem mortgages on other land, excluding those which the subsequent vendees have effected.

X. 7. 7. Out of 166 mortgages that have been made during the past 11 years, only 3 have been effected in order to purchase land, (*vide* page 120).

CHAPTER X.

SALE OF VILLAGE PRODUCE.

1. (i). The prices at which the principal crops were sold in the village in each of the last 5 years are given below. The prices or rates given have been taken from the *Bania* traders' records, and were the prices current during the harvest time. X. 1.
(i).

TABLE XLIV.—*Statement showing Prices of Produce in Tehong at Harvest Time.*

Crop.	SALE RATES IN SEERS PER RUPEE.				
	1920	1921	1922	1923	1924
<i>Rabi</i> —					
Wheat ..	$8\frac{1}{5}$	$6\frac{2}{5}$	8	$11\frac{2}{5}$	12
Gram ..	10	$6\frac{2}{5}$	$7\frac{4}{5}$	$14\frac{1}{8}$	$14\frac{1}{2}$
Barley ..	13	$8\frac{3}{4}$	$11\frac{1}{2}$	Not available	$18\frac{1}{4}$
<i>Kharif</i> —					
Maize ..	$10\frac{1}{5}$	$7\frac{3}{4}$	$17\frac{1}{2}$	$16\frac{3}{4}$	12
Gur ..	$5\frac{1}{2}$	$6\frac{1}{8}$	$7\frac{3}{4}$	$7\frac{1}{2}$ & 8	$5\frac{1}{5}$
Cotton ..	$6\frac{1}{8}$	$4\frac{1}{8}$	$5\frac{1}{4}$	$3\frac{3}{5}$	4

(ii). The prices of the above-mentioned products for each of the last 5 years as given in the Circle Note Book are as follows :— X. 1.
(ii).

TABLE XLV.—*Statement showing Prices of Produce as recorded in the Circle Note Book.*

Crop.	SALE RATES IN SEERS PER RUPEE.				
	1920	1921	1922	1923	1924
<i>Rabi</i> —					
Wheat ..	$8\frac{1}{2}$	6	$7\frac{1}{2}$	11	$11\frac{1}{2}$
Gram ..	$9\frac{1}{2}$	6	$7\frac{1}{2}$	$13\frac{1}{2}$	$13\frac{1}{2}$
Barley ..	12	8	10	17	17
<i>Kharif</i> —					
Maize ..	10	7	17	16	$13\frac{3}{4}$
Gur ..	5	$5\frac{1}{2}$	$6\frac{11}{12}$	7	7
Cotton ..	$5\frac{3}{4}$	$3\frac{3}{4}$	$4\frac{5}{24}$	3	$3\frac{1}{2}$

- X. 1. (iii). With the exception of *gur* and vegetables, the rest of the produce such as wheat, maize, cotton, etc., is generally purchased by the village *Banias* (*Aggarwals*), who are traders. *Gur* is generally purchased by five *jhiwars* of the village who trade in it and two *Banias* and one Brahman who manufacture sugar (*khanchi*). Vegetables are purchased by three vegetable-sellers of whom one is a weaver, another a *mochi*, and the third a *sarwan* (his ancestors kept camels), who claims to be a Mohammedan Rajput, as both purchasers and growers are residents of the village, they easily meet to buy and sell. The produce is examined and in accordance with its grade or quality and the market knowledge of both parties the price is settled; one rupee is given at once as *sie* (advance money) to confirm the bargain as struck and the produce is handed over later. Sellers seem to exercise the stronger influence in deciding prices.
- X. 1. (iv). Cases in which a grower sells to his family creditor are not common. The usual practice is for the purchasers to pay for the commodity to the growers after they have sold it in the central market. Accounts are cleared in from 7 to 30 days according to the ability of the individual purchaser to pay; needy sellers are given part-payment at once. Delay in payment tends to make producers seek those who are more prompt. In the case of vegetables, the purchasers either pay at once or in a week, even before they have completed selling: in many other villages payments are made after the produce is entirely or partly sold. Prompt payment in this village is partly the result of competition.
- X. 1. (v). An indebted producer tries to avoid selling to his creditor. If he cannot escape this, he has to sell from $\frac{1}{4}$ to $\frac{3}{4}$ of a seer cheaper than the prevailing rate; then the price is settled after the produce is handed over. G. handed over 8 maunds of *gur* to his non-agriculturist money-lender, *sunar* by caste. The price was settled and accounts cleared some ten days afterwards; the creditor purchased the produce $\frac{3}{4}$ of a seer cheaper than other buyers.
- X. 1. (vi). The grower elects to sell in the neighbouring markets of Phagwara and Ludhiana only when he needs some goods from there which he can bring back. In the markets the producer sells through brokers, who act as commission agents. If not in need of goods from these markets he prefers to sell in the village, although rates are lower by $\frac{1}{4}$ to $\frac{3}{4}$ of a seer per rupee as compared with rates prevalent in the markets. The difference in rates is thus explained:—
- (a). The unmetalled paths from the village to the metalled roads leading to the markets, are very troublesome for wheeled transport because of unevenness and sand.

(b) In the market the produce is frequently found to weigh less than when weighed by the grower. X. 1. (vi).

(c) The producer has to pay the market dues such as *arhat*, and weighing charges.

(vi). When a grower intends to sell his produce in any of the neighbouring markets he takes it to one of the agents or *arhtias*, through whom he wishes to sell. The agent sends for the *dalal* or broker, who gets the produce exposed to public view on the agent's land. The purchasers collect and begin to compete by bidding, and the broker finally accepts the highest bid. The weighman is sent for and the agent, who is responsible, examines his scales and measures, and the produce is weighed. The menial staff of the agents, (the agents are shopkeepers or holders of residential shops in the market area), are given dues from the heap of the produce for the services rendered by them from the time of heaping till that of selling or handing over of the produce. The dues are not given on any measured basis but may be roughly estimated at about three to four seers of the produce. The price is then calculated, and a percentage deduction of the charges made from the total. X 1. (vii).

The figures below show the charges prevalent in the markets at Ludhiana and Phagwara, which the people from Tehong generally visit.

TABLE XLVII. A.—*Phagwara Market Charges per Rs. 100/- of Produce.*

	Wheat.	Maize.	Cotton.	Gur.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
<i>Arhat</i> (commission) ..	1 0 0	0 12 0	1 8 0	1 8 0
Broker's fee ..	0 2 6	0 2 6	0 2 6	0 2 6
<i>Dharam</i> (charity) ..	0 1 0	0 1 0	0 1 0	0 1 0
<i>Gowshala</i> (for cow protection) ..	0 0 6	0 0 6	0 0 6	0 0 6
<i>Shagirdi</i> ..	0 1 0	0 1 0	0 1 0	0 1 0
Weighing charges ..	0 4 0	0 4 0	0 4 0	0 4 0
<i>Total</i> ..	1 9 0	1 5 0	2 1 0	2 1 0

TABLE XLVII B—*Ludhiana Market Charges per Rs. 100/- of Produce.*X. 1.
(viii).

	WHEAT AND MAIZE.		COTTON AND <i>Gur</i> .	
	From	To	From	To
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
<i>Arhat</i> (commission) ..	0 8 0	0 12 0	0 6 0	0 12 0
Broker's fee ..	0 2 6	0 2 6	0 2 6	0 2 6
<i>Dharam</i> (charity) ..	0 0 6	0 1 0	0 0 6	0 1 0
<i>Gowshala</i> (for cow protection)	0 1 0	0 1 0	0 1 0	0 1 0
Heaping of produce ..	0 1 0	0 2 0	0 1 0	0 2 0
Sweeping the floor ..	0 0 6	0 0 6	0 0 6	0 0 6
Weighing charge ..	0 4 0	0 4 0	0 4 0	0 4 0
<i>Total</i> ..	1 1 6	1 7 0	0 15 6	1 7 0

In the case of wheat, if sieving is done, then 6 annas per Rs. 100/- are added in both the markets.

X. 2. 2. Phagwara, Ludhiana and Phillour are the three chief markets in this neighbourhood. The last named is small and people generally visit the first two. The distances which the carts have to travel are approximately— to Phagwara 10 miles, Ludhiana 12 miles and Phillour 4 miles.

X. 3. 3. The nearest railway station is at Phillour, about 4 miles away. The first half of the road is unmetalled, uneven and sandy and this makes transport difficult; the last two miles are metalled.

X. 4. 4. The principal markets named above are situated on the main road which runs between Delhi and Lahore, and another road running from Phillour to Rahon, is available for those who wish to go to Phillour and Ludhiana. Both roads are metalled; in the rainy season their condition remains good, but the unmetalled paths which lead to the metalled roads become deplorable.

5. The usual means of conveyance are *gaddas* (carts). Donkeys are also X. 5.
used, but only for small loads and short distances; loads carried on carts
or donkeys are not charged according to mileage, although the customary
rates are really based on distance. To Ludhiana and Phagwara the cart
charges vary from Rs. 5/- to Rs. 7/- per load of 40 maunds, and from
Rs. 2/8/0 to Rs. 3/8/0 per load in the case of Phillour and Apra, which are
both 4 miles distant; Rs. 6/- in the former case and Rs. 3/- in the latter
case are the most common charges, *i.e.*, approximately $1\frac{1}{4}$ annas per maund
for Phillour and Apra, and $2\frac{1}{2}$ annas per maund for Phagwara and Ludhiana
(10 and 12 miles distant). The donkey charges are about the same as those
for carts.

6. Large and well-to-do medium owners commonly hold up produce X. 6.
in the hope of higher prices. A., a large owner, withheld his surplus
wheat last year for over six months, until he expected no further rise in
price; this year (1926) also he is holding up wheat. In December 1925 he
required some money; also some necessities for the marriage of his son had
to be purchased at Ludhiana. As these were heavy enough to require a
cart to bring them home, he carted his surplus maize to Ludhiana soon
after threshing. His experience of the previous year led him to withhold
cotton in order to secure as good a price as he did the year before. Soon
afterwards, however, he happened to visit the Canal Colonies and on his
return he began to sell cotton as he had heard that a fall in price was
anticipated. He is withholding this year's *gur* because he needs no money
at present. M., a well-to-do cultivating owner, is withholding wheat; so
also is K. B. had to sell his cotton early in order to purchase some neces-
saries at Ludhiana. As these required a cart to fetch them home, he took
his cotton to Ludhiana, and from the proceeds of its sale purchased his
requirements. G., a small cultivating owner, sells his surplus produce as
soon as it is ready. Those who hold up produce generally say that the
practice brings them little gain; even if they happen to secure a better
price, the *zemin্দars* suffer much loss and injury to the produce from
worms, insects, rats, etc. "Sometimes the injury and loss are so much,
that I lose rather than gain" was what was said by A. *Zemin্দars* in
many cases prefer selling to withholding. The local credit society deals
only in lending and borrowing; it does not attempt to organise the sale
of produce.

7. The dates fixed by Government for the payment of land revenue for X. 7.
the whole of the Circle in which the village is situated are 1st July for the

X. 7. *rabi* instalment and the 15th December and 1st February for the *khariif* instalments. The local officials fix different dates for different *zails* of the Circle each year, so as to receive payments about two weeks before the date fixed for payment at the Treasury. Thus the *rabi* demand is ordinarily collected about the middle of June, the first instalment of *khariif* in the first week of December and the second in the last half of January. In many cases the land revenue demand tends to make the cultivator sell his produce at once.

The *rabi* demand is Rs. 3,500/-. The sale price of wheat in the first week of June 1925 was 8 seers a rupee; the *rabi* demand in terms of wheat was, therefore, 700 maunds. Gram was selling at 10 seers a rupee, hence the demand in terms of gram was 875 maunds.

The first *khariif* instalment is Rs. 1,750/-. The sale price of maize in the first week of December was $10\frac{1}{2}$ seers a rupee, and the demand in terms of maize was, therefore, 459 maunds 15 seers. Cotton sold at 4 seers a rupee in the first week of December; consequently the demand in terms of cotton was 175 maunds. *Gur* and *shakkar* sold on the average at 5 seers a rupee, and so the demand in terms of these was 218 maunds 30 seers.

The second *khariif* instalment is Rs. 1,750/- Maize sold at 8 seers a rupee in the last half of January 1926, hence the demand in terms of maize was 350 maunds. In the case of cotton the price remained the same, so the demand in terms of cotton was as before. *Gur* in the second half of January sold at $5\frac{1}{2}$ seers a rupee, and the demand in terms of *gur* was, therefore, 240 maunds 25 seers.

X. 8. 8. There is no Co-operative Sale Society.

X..9 9. *Khaddar* (coarse cotton cloth) is manufactured by *julahas* (weavers) and by some of the *mochis* (shoemakers), who have adopted weaving as a profession. The people supply home-spun yarn and pay for the labour. The *khaddar* woven in the village is more or less entirely for village consumption. *Lungis* are made of three different types—for men's headwear, women's skirts and men's lower garments; all three varieties are made either from fine home-spun or machine-made yarns, partly for village consumption and partly for export. *Lungis* intended for men's turbans are sometimes made from fine silken thread. Ludhiana is a good market for all cotton or silk manu-

factures. *Durris* or small carpets, sometimes used for bedding, and bed sheets, are also manufactured ; generally the people supply home-spun yarn and pay for the labour. x.9.

Sugar manufacture (*khanchi*) is conducted on primitive lines by three families, two *Bania* and one Brahman, who sell retail throughout the year. *Gur* is manufactured by cultivators , each one keeps a suitable quantity for household consumption, and the surplus is sold in the market or to those who come round to buy.

Lohars manufacture metal articles to order , one of them makes iron buckets for wells. *Tarkhans* make wooden articles for village consumption ~~on~~ⁱⁿ order only. *Kumhars* make earthenware articles which they either sell in the village or carry on donkeys to neighbouring villages for sale.

CHAPTER XI.

PURCHASES AND INDUSTRY.

- XI. 1. 1. The villagers purchase commodities from the local shops and such travelling traders as visit the village from time to time, they also obtain goods from Phillour, Phagwara, Ludhiana and Apra. The last is a flourishing rural bazaar, four miles away to the east. Price and quality of the commodities influence the consumers in deciding upon the place of purchase. Commodities for household consumption are frequently bought in small quantities and often at short notice, and so the majority of such purchases are made from the village shops, and on credit. In petty dealings grain is the chief medium of exchange.
- XI. 2. 2. There are 25 shops in the village dealing in the following commodities :—
- i. Three deal in cloth; one of them in addition trades in general goods on a small scale.
 - ii. Two shops sell vegetables and fruits.
 - iii. Eleven sell salt, oil-cakes, kerosine oil, cotton seeds, pulses soap, colours.
 - iv. One is a small general merchant.
 - v. One deals in medicines.
 - vi. One sells distilled medicinal liquids and *pansari* goods.
 - vii. One sells meat.
 - viii. Three deal in *khanchi* sugar.
 - ix. Two sell sweetmeats on a small scale.
- XI 3. 3. Ludhiana 12 miles away, Phagwara 10 miles, Phillour 3 miles and Apra 4 miles, are the chief markets whence commodities are purchased. Apra is situated in a purely rural area approachable only by unmetalled roads.
- XI. 4 4. Purchases are made on credit as well as by cash. In the former case payments depend on the ability of the buyers; some pay after a week, some after a month or more. Cultivators and others who depend upon land for their livelihood pay twice a year at harvest times. Payments

are rarely made in kind ; where they are, the price of the produce is calculated at the prevailing rate. In some cases credit accounts run for a year and even more ; they are cleared if the agricultural year has been good and the debtor has no other immediate or pressing need. XI. 4.

5. Goods are often adulterated and not worth the price paid. Commodities sold by an *attar* or physician afford ample opportunity for adulteration which is commonly practised. *'Arqs* or distilled medicinal liquids are watered for retail sale ; if they are to be kept some time, distilled water is used to avoid deterioration. Goods thus adulterated may bring in from $2\frac{1}{2}$ to 3 times the profit on the pure article. In the case of dry drugs the loss to the consumers is even more, the commodities sold bringing in from 3 to 6 times as much as would be realised if the article were pure. In the case of *pansari* goods such as salt, soap, oils, cotton seeds, oilcakes, pulses, etc., they are known to the consumer, so the gain from adulteration is less, but may be as much as 2 to 3 annas in the rupee. The manufacture of sweetmeats offers a fair field for adulteration, as sugar of inferior grade is mixed with the superior article, and machine-made sugar (*kand*), which is comparatively cheap, is used for sweets and sold for the natural product ; mustard oil is also used instead of *ghi*. Even in the case of *bazari* goods (cloth) inferior stuff is passed off for better qualities ; for instance, "Saw Brand" *latha* (longcloth), or some other inferior variety, is passed off for Key Brand " *latha*. This may cause a loss of 2 or more annas in the rupee to the purchaser. Stale and inferior vegetables and fruits are mixed with, and sold as, fresh. XI. 5.

6. It was only after prolonged and continuous friendship that four of the shopkeepers allowed the investigator to test the measures and scales they used, on condition that their names were omitted from the report. They do not realise that any discrepancy in measures and scales is liable to bring them within the scope of the law. XI. 6.

The scales used by the four shopkeepers consisted of the ordinary stick balance and the pivot hole in each case was found to be in the centre, and the beam when suspended hung horizontal. A thing weighed in one balance weighed the same in the other. One of the shopkeepers had purchased a fresh set of stamped weights, which were used to test the accuracy of those used by the others. In one case there were two 4-seer weights ; one

- XI. 6 was correct, but the other was $\frac{1}{8}$ th of a seer too heavy, although both appeared to be stamped and standard ones. The shopkeeper had inserted lead into the hollows which are generally to be found in the lower surface. He admitted that he used the heavy weight when he was purchasing commodities like *gur*, wheat, cotton, etc., from the cultivators' womenfolk, or if he were weighing produce in exchange for which his customers wished to purchase other goods from him. In another case a $\frac{1}{2}$ seer stamped weight was short by $\frac{1}{16}$ th of a seer. This weight is used for selling every day, but the shopkeeper does not buy with it; when buying he takes the right measure from others. In a third case a $\frac{1}{4}$ seer stamped weight was short by nearly $\frac{1}{64}$ th of a seer. In a fourth case there was no discrepancy as the weights were recently purchased.

In addition to the stamped standard weights, the shopkeepers in small sales use *kachcha* weights of ordinary stones, which are often less in weight than they are supposed to be. The accuracy of some of them was tested against stamped standard weights, and it was found that in one case a *kachcha* seer measure was less by nearly $\frac{1}{32}$ nd part of its nominal weight, and a measure of one *pao kachcha* was short by $\frac{1}{8}$ th. In a second case, a *kachcha* 5-seer measure was less by the weight of 4 *pice* than it should have been when weighed against its equivalent standard measure of 2 seers. In a third case a *kachcha* weight of $1\frac{1}{2}$ *paos* was less by the weight of nearly $1\frac{1}{2}$ *pice*. The purchaser also loses through the clever and dishonest weighing of goods by the shopkeepers, as was admitted by them; indeed it may be said that the purchaser loses more through clever weighing than through short weights.

- XI. 7. 7. No goods are purchased from a Co-operative Supply Society or Union.
- XI. 8. 8. Working in leather and the making of shoes are done by each family of *chamars* on a small scale in spare hours not taken up with other labour. The leather prepared is either exported or sold to the cultivators of the village who make irrigation bags from it. The shoes they make do not suffice for the needs of the village. Two families of *ghumars* make earthenware pots, which are sold in exchange for grain as well as for cash. The potters of neighbouring villages also come here to sell pots.

Sugar is made on a small scale by three families, one Brahman XI.8. and two *banias*. Machine-made sugar is also imported. There is a brick burning industry organised and managed by four *Bania* (*Aggarwal*) shareholders. The bricks are of ordinary size and sell at present at the rate of Rs. 13/- per 1,000.

The *bania* women undertake the spinning of Kashmiri wool and the yarn is sold at Ludhiana to make shawls. Raw wool is purchased from there at the rate of Rs. 2/- to Rs. 2/4/0 per seer, and separated by hand into two grades of about equal bulk, the inferior quality is sold at Rs. 1/8/0 per seer. This work of separation is said to be injurious to the eyes. The fine quality is treated with boiled rice and combed and spun for sale; the combing and spinning operations reduce the quantity by about half, but the product brings from Rs. 12/- to Rs. 16/- per seer. A woman worker's wages average 3 to 4 annas per day. The spinning is done generally in the rainy months from July to September.

9 Cotton is ginned in the village. Most families keep one or two XI 9. wooden machines, known as *belnas*, for ginning cotton, and they are worked by the womenfolk of the house. Each family also owns one or two spinning wheels, which are worked by the women. Machine-made cotton and silken thread (*poorbi soot*) are also imported, to be woven into *lungis* for men and women, and for lining bed sheets. There are 25 looms in the village owned and worked by weavers or by some of the *morchis*, who have adopted weaving as their calling. All weaving is done by men, but the women assist in the preparatory operations. Most of the cloth is manufactured for village use.

10. There are eight oil-presses in the village, of which seven are in XI.10. working order and one is out of use, all of them are owned and worked by *telis* of the village.

11. Flour is ground in the village, and also in the neighbouring towns XI 11. of Ludhiana and Phillour, where there are oil engines which grind cheaper than the one here, which is owned and worked by a village *lohar* and his son. The grinding charges are 7½ annas per maund or Rs. 46/14/0 per 100 maunds in the case of wheat, 10 annas per maund or Rs. 62/8/0 per 100 maunds in the case of maize, and 3 annas per maund or Rs. 18/12/0 per 100 maunds in the case of *darar* (roughly ground flour for cattle). There are also certain customary deductions in kind from the flour ground—some 2½ *pao* or 5th

XI. 11. seer per maund of the grain, *i.e.*, $62\frac{1}{2}$ seers per 100 maunds. There is a general complaint that the flour is reduced in quantity by more than the above, varying from $\frac{1}{2}$ a seer to $1\frac{1}{2}$ seers per maund, and this has been found true in many cases. The same engine can be used to chop fodder, but the people make little use of it for this purpose. During the period of investigation the engine was used only once for chopping dry maize plants, and this was done in the midst of corn grinding. The charges for chopping fodder are 5 annas per maund or Rs. $31/4/0$ per 100 maunds.

There are also four stone-mills for grinding flour, worked by cattle power. Three of them are owned by *lohars* of the village and one by an *Arain* cultivating owner. Any cultivator may use them for grinding; he uses his own oxen and pays the owner $1\frac{1}{2}$ seers of wheat flour, 2 seers of maize flour, and 1 seer of *darar* per maund ground. Almost every house keeps one or two hand-mills and the women work them.

XI. 12. 12. Sugarcane is pressed in the village. This year there are 43 presses at work all owned by cultivators; others wishing to use a press and the *gur*-boiling apparatus may do so on payment. The charges for pressing and making *gur* is $2\frac{1}{2}$ to 3 annas for two earthen jars of juice. This is roughly equivalent to $2\frac{1}{2}$ to 3 annas for the preparation of 20 seers of *gur*.

CHAPTER XII.

PRICE OF LAND.

1. The following statement shows the recorded sale price of land in XII.1. the quadrennium ending 1899-1900, 1907-08 and 1923-24.—

TABLE XLVIII.—*Showing the Recorded Sale Price of Land in Quadrenniums ending 1899-1900, 1907-08 and 1923-24.*

Quadrennium ending	Price per acre	Percentage increase on 1899-1900	Percentage increase on 1907-1908.	Price per cultivated acre	Percentage increase on 1899-1900.	Percentage increase on 1907-1908
	Rs. a. p.			Rs. a. p.		
1899-1900 .	216 1 5	..	..	226 5 3	..	..
1907-1908 ..	311 4 3	44 4	..	311 4 3	37 5	..
1923-1924	*1,136 11 3	426 2	271 6	1,283 10 5	467 1	312·2

*On the basis of money actually received

2 A similar statement is given below showing cash rents per acre for XII. 2. the same quadrennial periods :—

TABLE XLIX.—*Showing Cash Rents per Acre in Quadrenniums ending 1899-1900, 1907-08 and 1923-24.*

Quadrennium ending.	Cash rent per acre of <i>chahi</i> land.	Percentage increase on 1899-1900	Percentage increase on 1907-1908	Cash rent per acre of <i>barani</i> land.	Percentage increase on 1899-1900.	Percentage increase on 1907-1908.
	Rs. a. p.			Rs. a. p.		
1899-1900 .	26 2 0	..	..	10 8 0	..	..
1907-1908 .	26 14 6	+2·9	..	8 4 4	—21·2	..
1923-1924 .	31 8 0	+20·5	+17·1	*21 0 0	+100·0	+157·8

*SRO. 1923-24.

5. Only one instance has been found of land purchased during the XII.5. past five years and now let on cash rent. This case has been included to ascertain the percentage return given by the cash rent (after deducting actual expenses paid by the landlord) on purchase price. The transaction took place in 1924 (Mutation No. 465) and the information relates to the year 1924-25—

(a). Area of land sold (all cultivated)	8 kanals 19 marlas.
(b). Total purchase price	.. .. Rs. 1,350/0/0
(c). Average price per acre ($10\frac{2}{5}$ kanals=1 acre)	.. Rs. 1,575/0/0
Cash rent received by the purchaser	
during the year	.. .. Rs. 13/8/0

XII. 5.	(d). Cash rent per acre	..	..	Rs. 15/12/0
	(e). Percentage return of (d) on (c)	..	..	1 per cent.
	Land revenue and local rates that purchaser has paid			Rs. a. p.
		..	..	2 12 9
	Do. (per acre)	..	..	Rs. 3/4/3
	(f). Cash rent per acre after deducting actual expenses (land revenue and local rates) paid by the landlord			Rs. 12/7/9
	(g). Percentage return of (f) on (c)	.	..	0.79 per cent.

XII. 6. 6. Four cases have been investigated to ascertain the net percentage return to the purchaser on land purchased in the last five years ending 1924-25 and now let on share rents.

Case No. 1.

The transaction took place in June, 1924 (Mutation No. 520) and information as regards rent concerns the year 1924-25—

(a). Area of land sold (all cultivated)	..	7 kanals 6 marlas.	
			Rs. a. p.
(b). Total purchase price	..	..	1,240 0 0
(c). Average purchase price per acre	..	..	1,784 15 0
(d). Share rents received by the landlord in the year converted into cash at the current village rates—			
i. $\frac{1}{3}$ rd share in the price of melons sold off the land	..	..	7 0 0
ii. $\frac{1}{2}$ share cotton—1 maund 8 seers at 4 seers a rupee	..	..	12 0 0
iii. 4 bundles of dry cotton plants	..	..	0 8 0
iv. Half produce of <i>senji</i> crop : (the growth was poor)	..	7 5 0	
	Total	..	26 13 0
Average per acre	..	..	41 7 0
(e). Percentage return of (d) on (c)	..	..	2.31 per cent.
Amount spent by purchaser during the year—		Rs. a. p.	
i. For manure	..	..	7 0 0
ii. Land revenue and local rates		3 14 6	Rs. a. p.
Average per acre	..	..	15 11 0
(f). Share rents in terms of cash after deducting actual expenses per acre	..	..	25 12 0
(g) Percentage return of (f) on (c)	..	..	1.44 per cent.

Case No. 2.

The transaction (Mutation No. 516) took place in June, 1924— XII.6.

(a). Area of land sold (all cultivated)	..	8 <i>maulas only</i>	
		Rs. a. p.	
(b). Total purchase price	.. ..	400	0 0
(c). Average purchase price per acre	.. ..	10,500	0 0
(d). Share rents received by the landlord in the year, converted into cash at the current village rates—		Rs. a. p.	
i. 18 seers of wheat at 8 seers a rupee	..	2	4 0
ii. $\frac{3}{4}$ <i>tangars</i> of straw at 1 <i>tangar</i> a rupee	..	0	12 0
iii. <i>Chari</i> fodder at Rs. 3/- per <i>kanal</i> (the growth was poor)	.. ..	0	12 0
Total	.. ..	3	12 0
Average per acre	.. ..	98	0 0
(e) Percentage return of (d) on (c)	.. ..	0.93	per cent.
Expenses met by the landlord—		Rs. a. p.	
i. Manure: none given as it was <i>main</i> land.			
ii. Land revenue and local rates	.. ..	0	3 6
Average per acre	.. ..	5	2 0
(f). Rent per acre after deducting actual expenses met by the landlord	.. ..	92	14 0
(g). Percentage return of (f) on (c)	.. ..	0.88	per cent.

Case No. 3.

The transaction (Mutation No. 210) took place on 29th October, 1919—

(a). Area of land sold (all cultivated)	.. ..	7 <i>kanals.</i>	
		Rs. a. p.	
(b). Total purchase price	.. ..	1,000	0 0
(c). Average purchase price per acre	.. ..	1,500	0 0
(d). Share rents received by the landlord in the year, converted into cash at the current village rates—		Rs. a. p.	
i. 4 maunds of wheat at 8 seers a rupee	20	0 0	
ii. 7 <i>tangars</i> of straw at 1 <i>tangar</i> a rupee	7	0 0	
Total	.. ..	27	0 0
Average per acre	.. ..	40	8 0

XII. 6.	(e). Percentage return of (d) on (c)	2.70 per cent.
	Expenses met by the landlord—	Rs. a. p.
	i. Manure	7 0 0
	ii. Land revenue and local rates ..	<u>3 2 6</u>
	Total ..	Rs. a. p. 10 2 6
	Average per acre	15 3 9
	(f). Rent per acre after deducting actual expenses met by the landlord	25 4 3
	(g) Percentage return of (f) on (c) ..	1.68 per cent.

Case No. 4.

The transaction (Mutation No. 639) took place in June 1924—

(a). Area of land sold	<div> <div>Cultivated</div> <div>Total ..</div> </div>	<div>1 kanal 6 marlas.</div> <div>1 kanal 7 marlas.</div>
		Rs. a. p.
(b). Total purchase price		100 0 0
(c). Average purchase price per acre		777 12 6
(d). Share rents received by the landlord in the year, converted into cash at the village current rates—		
		Rs. a. p.
i. 14 seers of wheat at 8 seers a rupee ..		1 12 0
ii. 1 tangar of straw at 1 tangar a rupee ..		<u>1 0 0</u>
Total		2 12 0
Average per acre		21 6 6
(e). Percentage return of (d) on (c)		2.75 per cent.
	Expenses met by the landlord—	Rs. a. p.
i. Manure		Nil.
ii. Land revenue and cesses		0 4 9
Average per acre		Rs. a. p. 2 5 0
(f). Rent per acre after deducting actual expenses met by the landlord		19 1 6
(g). Percentage return of (f) on (c)		2.45 per cent.

CHAPTER XIII.

YIELDS.

1. A copy is given below of the estimates expressed in seers per acre, issued by the Director of Land Records for each class of soil and each crop in Phillour Circle, in which Tehong is situated. XIII.
1.

TABLE L.—*Statement showing Yields per Acre for Crops on Different Soils in Phillour Circle.*

YIELD PER ACRE IN SEERS.			
	<i>Chahr.</i>	<i>Sarlab.</i>	<i>Baram.</i>
KHARIF CROPS.			
Maize	820	580	380
Rice	600	520	400
<i>Mash</i>	270	220	300
<i>Mung</i>	260	220	300
<i>Moth</i>	250	170	300
<i>Til</i>	160	120	180
Other crops ..	190	260	280
Sugarcane ..	1,541	1,541	..
Cotton	182	110	110
<i>Chahr</i>	1,541	1,525	1,280
<i>San</i>	170	160	150
Indigo	30	25	20
Red Pepper ..	425	..	..
Vegetables ..	2,010	..	..
RABI CROPS.			
Wheat	600	450	325
Gram	550	300	600
Wheat & Gram ..	600	350	570
Wheat & Barley ..	540	300	350
Barley	550	400	300
<i>Massar</i>	350	325	300
Barley & <i>Massar</i> ..	300	320	250
<i>Sarson</i>	260	120	150
Poppy	560	..	..
Tobacco	1,250	..	..

- XIII.
1. A list is next given of the yields expressed in seers per acre, assumed by the Settlement Officer, at the last Settlement for each class of soil and each crop in Phillour Circle.

TABLE LI.—*Statement showing Yields assumed by the Settlement Officer at the last Settlement, 1913-17.*

Crop	Chahi and Abi	Sailab.	Barani.		
			Grade I.	Grade II.	Grade III.
KHARIF CROPS.	Seers	Seers.	Seers.	Seers	Seers.
Maize .	800	..	400	320	280
Rice .	600	..	400	400	200
Mung .	260	..	180	160	150
Mash ..	260	..	180	160	150
Moth .	220	..	180	160	150
Til .	160	..	120	110	90
Jowar & Bajra .	240	..	180	160	150
Sugarcane .	800	..	800	600	360
Cotton .	240	..	180	160	80
Hemp .	Rs 12/- all round.				
Indigo ..	,, 12/- do.				
Chillies	,, 20/- do.				
Fruits & Vegetables	,, 14/- do.				
Fodder .	Rs. 8/-	..	All barani Rs. 6/-		
RABI CROPS.					
Wheat .	560	..	400	320	220
Barley ..	560	..	400	320	200
Gram ..	560	..	440	400	220
Wheat & Gram ..	560	..	440	400	220
Wheat & Barley ..	560	..	440	400	220
Massar ..	400	..	240	200	170
Barley & Massar ..	500	..	300	220	180
Barley & Gram ..	560	..	..	400	220
Sarshaf ..	260	..	160	160	120
Taramira & Toria..	260	..	..	160	120
Linseed ..	260	..	..	160	..
Fruits & Vegetables	Rs 16/- all round.				
Poppy ..	,, 20/- do.				
Tobacco ..	,, 20/- do.				
Melons ..	,, 16/- do.				
Fodder .	Rs. 8/-	..	All barani Rs. 6/-		

2. The following are copies of the Settlement Officers' inspection notes on the village :— XIII.
2.

Miscellaneous General Remarks by the Settlement Officer in 1883.

"Irrigation wells *pacca* 41, *kachcha* nil. The proprietors are *Riens* in good circumstances. The soil is firm and good. The sugarcane lands are 4 per cent. on cultivated area. Cotton and garden produce are grown. The collection has been easy. The new revenue rates give a slight increase on former *jamma*, which is accordingly demanded as the estate is rich and flourishing."

Note by Settlement Superintendent in 1883 (translated from Urdu).

"It is a well-to-do village. The lands in general are good, except in the south-west. The wells are in a very progressive state. Irrigation is done on a large scale. The agricultural tribes are *Arains*, *Jats* and *Rajputs*; they generally cultivate with their own hands and are industrious. No one is extravagant. Ordinary crops are produced, and the chief crops are popular. The village is not famous for any particular cropping. The *jamma* is ordinary. It is justifiable to fix the *jamma* at Rs 5,000/- "

"There is a garden in this village which gives nearly Rs 200/- as annual income."

Settlement Officer's Remarks, dated 6th July, 1885.

"This village is in good condition. It is owned by *Arains* (37 shares), *Jats* (8 shares) and *Rajputs* (1 share). Sales and mortgages are not above the average, and prices are higher by a good deal for mortgages."

"The soil is quite average; the south of the uplands is a little light. In the north the soil is grey loam with a good deal of *kallar* shown as *kalrahi*. It is liable in part to flooding from the *chhamb*, but on the whole the *chhamb* does more good than harm. Cultivation has not increased to any appreciable extent since last Settlement, but irrigation has exceeded by 302 *ghumaons*. The crop irrigated area per bucket is 13 acres which is moderate, but there is much irrigation in the *Bet*. On the up irrigated area, cane is about a half better than usual and cotton a half worse. Holdings are of about the average size. Population has increased since 1868. It is rather denser than average on the crop area. This is a strong village and may be assessed with above rates. I recommend Rs. 5,250/-."

Note by Sardar Hotu Singh, Settlement Officer, dated 2nd February, 1916.

"This is an *Arain* and *Jat* (Sikh) village. *Arains* own 74 per cent. and *Jats* 18 per cent. This is a large village consisting of 781 houses, of which 17 are *pakka*. It has a prosperous appearance. The *chahi* lands and crops are very good and so are *barani*. Some areas adjoining Pal-kadeem and Rasul-pur are inferior because they are uneven. Cultivated area is $\frac{1}{12}$ th more

- XIII. while irrigated area is $\frac{1}{4}$ th less Increase in cultivation is appreciable.
 2. Increase in irrigation is average. *Chahi* rates are much higher and so are *barani* ones."

"Cropping is good. Sales are $\frac{1}{4}$ rd less. Most of them are old and have affected the average price Mortgages are almost all new and are about average. Mortgage money is half as much again Alienations were made by *Arains* to repay old debts and by *Jats* for litigation and expenses of marriages. Average area per owner is 3 as against 4 The owners are prosperous. A good strong village. The *Dhaha* does more good than harm. *Bet* crops are very good now when other *barani* lands badly need rain."

"Assessed at Rs. 7,000/-."

- XIII. 3 & 4. A table is given below showing the character of each harvest for the last five years for each of the chief crops, and the *zemindars'* estimate of the yield in maunds per acre of each of the main crops for each of the above harvests on each class of soil—

TABLE LII.—Statement showing the Character of last Five Harvest and *Zemindars'* Estimate of Yields.

Year.	Harvests.	CHARACTER OF HARVESTS ACCORDING TO ZEMINDARS' OPINIONS.		ZEMINDARS' ESTIMATE OF THE YIELDS IN MAUNDS PER ACRE.	
		<i>Chahi.</i>	<i>Barani.</i>	<i>Chahi.</i>	<i>Barani.</i>
Kharif 1920	1. Maize	Good	..	$23\frac{1}{10}$	..
	2. Cotton	Do.	..	$29\frac{2}{5}$	..
	3. <i>Kamad</i>	Do.	..	$16\frac{4}{8}$	..
Rabi 1921	1. Wheat	Average	Below Average	$14\frac{3}{4}$	$10\frac{1}{2}$
	2. Wheat & Gram	Do.	Do.	$14\frac{3}{4}$	$11\frac{11}{20}$
Kharif 1921	1. Maize	Good	..	$23\frac{1}{10}$	..
	2. Cotton	Do.	..	$16\frac{4}{5}$	..
	3. <i>Kamad</i>	Do.	..	$29\frac{2}{5}$	..
Rabi 1922	1. Wheat	Good	Average	$18\frac{9}{10}$	$14\frac{3}{4}$
	2. Wheat & Gram	Do.	Do.	$18\frac{9}{10}$	$15\frac{3}{4}$
Kharif 1922	1. Maize	Good	..	$23\frac{1}{10}$	..
	2. Cotton	Do.	..	$16\frac{4}{5}$	..
	3. <i>Kamad</i>	Do.	..	$19\frac{2}{5}$	..
Rabi 1923	1. Wheat	Good	Average	$18\frac{9}{10}$	$14\frac{3}{4}$
	2. Wheat & Gram	Do.	Do.	$18\frac{9}{10}$	$15\frac{3}{4}$
Kharif 1923	1. Maize	Average	..	$17\frac{17}{40}$	..
	2. Cotton	Good	..	$16\frac{4}{5}$	..
	3. <i>Kamad</i>	Do.	..	$29\frac{2}{8}$	..
Rabi 1924	1. Wheat	Average	Poor	$14\frac{3}{4}$	$8\frac{2}{5}$
	2. Wheat & Gram	Do.	Do.	$14\frac{3}{4}$	$9\frac{9}{20}$
Kharif 1924	1. Maize	Good	..	$23\frac{1}{10}$	..
	2. Cotton	Very good	..	$19\frac{19}{20}$	..
	3. <i>Kamad</i>	Do.	..	$34\frac{18}{20}$	..
Rabi 1925	1. Wheat	Average	Poor	$14\frac{3}{4}$	$8\frac{2}{5}$
	2. Wheat & Gram	Do.	Do.	$14\frac{3}{4}$	$9\frac{9}{20}$

S. S. estimates the yields of the chief crops every year, both for his own harvest and that of his tenants. On being questioned by the investigator he said that there was no difference in the yield of wheat and *berra* (wheat and gram) for the *rabī* harvests of 1924 and 1925 on *chahi* and *barani* lands. *Chahi* lands yielded on the average $1\frac{1}{5}$ to $1\frac{3}{5}$ maunds per *kanal*, and *barani* lands yielded $\frac{2}{5}$, $\frac{3}{5}$ and 1 maund according to variety; the yield of *berra* (wheat and gram) was 4 seers more in the case of *barani* lands. In the year 1921, the yields of wheat and *berra* were regarded as similar to the yields in the harvests of 1924 and 1925, with the difference that *barani* lands in 1921 yielded about $1\frac{1}{5}$ maund more. Yields of wheat and *berra* in the years 1922 and 1923 were $1\frac{4}{5}$ maunds on the average on *chahi* lands; on *barani* lands the yield of wheat was $1\frac{2}{5}$ maunds, while that of *berra* was 4 seers "more per *kanal*." *Berra* as compared with wheat alone is said to give a much better outturn on *barani* fields; one of the two, and most likely gram, will flourish even if rains fail.

In *kharif* 1920, 1921, 1922 the yield of maize, cotton and sugarcane was $2\frac{1}{5}$, $1\frac{3}{5}$, and $2\frac{4}{5}$ maunds per *kanal* respectively. In *kharif* 1923 the yield in the case of cotton and cane on the average was similar to that of the previous year, but in the case of maize the yield was less by $\frac{1}{2}$ maund per *kanal*, owing to an excess of rain. The *kharif* of 1924 is said to have been much better than usual for cotton and cane. The outturn of the former was $1\frac{4}{5}$ to 2 maunds and that of the latter $3\frac{1}{5}$ to $3\frac{3}{5}$ maunds on average. The yield of cane in tenant cultivation was said to be a little less, since the tenants consume more *gur*, juice and canes during the days of pressing.

K., another *zemin্দar* with a good memory, was also questioned as to the yield of crops in different years, and his estimates were practically the same as those of S. S. When other *zemin্দars* were questioned, they all suggested S. S. as the man most likely to make reliable answers; he gave his answers without hesitation, so the information given above is as reliable as facts, which depend on the memory of a man of the farmer class, can be.

CHAPTER XIV.

RENTS.

A.—GENERAL.

- XIV.
A. 1. 1. The following statement classifies the land of the village according to the way in which it is cultivated :—

TABLE LIII.—*Showing How the Cultivated Area is Held and Cultivated in Tehong.*

	Total cultivat- ed area of the village.	Area cultivat- ed by owners.	Area cultivat- ed by occu- pancy- tenants.	AREA CULTIVATED BY TENANTS- AT-WILL.			
				Paying at revenue rates.	Paying at <i>batai</i> rates.	Paying cash rents.	Paying other rents.
	1	2	3	4	5	6	7
Acres ..	2,161	870	5	25	823	273	165
Percentages ..	100	40·25	0·23	1·15	38·93	12·63	7·63

- XIV.
A. 2. 2. There is no difficulty in obtaining tenants in the village.

- XIV.
A. 3. 3. Changes among tenants are frequent. Ordinarily, a tenant stays on a plot only for one year and cases are even found where a tenant cultivates a plot for one crop or half a year only. The statement on the following page indicates the period of tenancy on 30 plots selected at random. A cross indicates a change of tenant. Where no change has taken place, the column is left blank.

TABLE LIV.—Showing Changes in Tenancy on 30 Fields in Tehong.

Serial No.	Khasra No.		1921.		1922.		1923.		1924.		1925.		REMARKS.
			Rabi.	Kharif.	Rabi.	Kharif.	Rabi.	Kharif.	Rabi.	Kharif.	Rabi.	Kharif.	
1	3359	.	.									×	The blanks before the first cross on the left indicate that in the preceding years the plot was cultivated by the owner himself (khudkashi).
2	3360	..	..				×	×		×	
3	3361	.							×	×		×	
4	3363	.	.						×	×		×	
5	3364	.					×	×		×		×	
6	3365	..	.	×	×								* The plot was taken back from the tenant and cultivated by the owner.
7	3374	.	.					×	×	×		×	
8	3376	.	.				×	×		×	×	*	
9	3377	..	.				×	×		×		×	
10	3378	..	..				×	×			×	×
11	3379	.	.				×	×		×		×	
12	3380	..				×	×			×		×	
13	3382	..								×		×	
14	3383	..	.						×	×		×	
15	3384	..	..					×	×		×	×
16	3385	..	.				×	×		×		×	
17	3389	..					×	×	*	×		×	
18	3392	..	..				×	×		×		×
19	3393	..	.				×	×		×		×	
20	3394	..	..				×	×		×	
21	3409	..					×	×		×		×	
22	3415	..	.		×	×				×	×	×	
23	3432	..	..		×	×					
24	3457	..	..					×	×			×
25	3464	..					×	×		×			
26	3465	..	.				×	×				×	
27	3504	.	..					×				×	
28	3514	..	..		×	×				×		×
29	3522	.	..				×	×		×		×	
30	3532	..	..		×	×				×		×

XIV.
A. 4.

4. Absentee landlords prefer one year's *chakota* to *batar* rent as they are unable to watch the crop and safeguard their interests. Moreover, as they have neglected their houses, they have no facilities for storing produce or for staying in the village themselves until it is sold. In the case of *chakota*, a one year's lease is preferred by the landlord, as a better offer may be made the next year.

Non-cultivating small owners, who themselves, or their families, reside in the village more or less permanently, prefer *batar*, for the system enables them to share the produce, green or ripe, and they thus have the same advantages as a cultivator. If, for example, an owner's children want green maize cobs when his land is growing maize on *batai*, he can settle with his tenant to share two beds or a certain area of the green crop in equal parts; he can do the same in the case of cane and fodder crops—(cane is grown on *batar* in the *Bet*). Such facilities cannot be enjoyed if the land is let on cash rents. The lands which are best in fertility or situation are let on *batai*. On the other hand, the aim in poor lands is to let them on *chakota* for a period of from one to three years. Tenants prefer *chakota* or a lease provided the land can be improved.

Tenants would like to grow cotton and cane on cash rents in the *Bet*, if they could get land there even for a year. 15 plots under cotton in the *Bet* were all found to be subject to *batar*; no land on cash rent is to be had for this crop here. The cultivation of cotton by tenants is also to be found in the *Dhaka*, but the plots are few in number, all pay *batai*, and none exceeds 4 *kanals* in area; the reluctance of owners to let on cash rents, and the poorer facilities for irrigation here, are responsible.

Sugarcane is not grown either on *batai* or cash rents by tenants in the *Dhaka*. A proverb says "*kamad chahle te kapas mahle*," i. e., the cane area should be in the immediate vicinity of the well to facilitate waterings, and cotton grown away from and on the rising side of it, as it requires less water. Cane is a commercial crop, and tenants would like to grow it in the *Bet* on cash rents, but land is lacking except on *batai*. There are a few cases of cash rents, but only where the tenant is some relative of the owner, or where the tenant has grown the crop on *batai* also, and in this case the area under *batai* is often greater than that on cash rents.

For vegetables, owners would prefer *batai*, but the tenants do not agree. Whenever *batai* is found—J., for example, grows one *kanal* of carrots, etc., on *batar*—the vegetables grown are for the joint consumption of the owner and tenant, and the area cropped is small. Vegetables require more trouble though they are more profitable, and tenants think twice

before growing them on *batai*. If the produce is grown for sale, the shares are not equal, but the tenant takes $\frac{2}{3}$ allowing $\frac{1}{3}$ only to the owner. Such cases of *batai* are, however, very rare, tenants generally grow vegetables on cash rents.

5. The following cash rents are paid on 273 acres of different classes of soils, calculated in accordance with Chapter XX. of Douie's *Settlement Manual* :—

TABLE LV.—*Showing Cash Rents paid on Different Classes of Soil in Tehong.*

CLASS.	SEPARATE SOIL RENTS.			LUMP RENTS AGGREGATING RS 2,012 ON 85 ACRES RESOLVED INTO		TOTAL RESULTS.		
	Acres.	Rate.	Total rent.	Acres.	Total rent.	Acres	Rate.	Total rent.
		Rs. a p.	Rs. a p.		Rs. a p.		Rs a p	Rs a p
<i>Chahn</i> ..	79	31 8 0	2,488 8 0	35	1,207 3 2	114	32 6 8	3,695 11 2
<i>Barani</i> .	109	21 0 0	2,289 0 0	50	804 12 10	159	19 7 4	3,093 12 10

6. A comparison of the rise in the value of agricultural produce and cash rents is next attempted. The material has been taken from Statement 8 of the Village Note Book.

TABLE LVI.—*Statement showing the Rise in Cash Rents in Tehong.*

YEAR.	RENT PER ACRE.			
	<i>Chahn</i> .	Average.	<i>Barani</i> .	Average.
	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.
1884-85 } ..	(1) 15 12 0	18 6 0	(1) 5 4 0	6 8 9
1887-88 } ..	(2) 21 0 0		(2) 7 13 6	
1891-92 ..	26 4 0	26 4 0	7 13 6	7 13 6
1895-96 ..	32 2 6	32 2 6	7 13 6	7 13 6
1899-1900 ..	(1) 31 8 0	26 4 0	(1) 19 11 0	10 8 0
	(2) 21 0 0		(2) 10 8 0	
	(3) 42 0 0		(3) 8 8 6	
	(4) 10 8 0		(4) 7 13 6	
1903-04 ..	(5) 23 10 0	26 4 0	(5) 5 15 0	
	(1) 31 8 0		(1) 7 14 0	7 3 6
	(2) 21 0 0		(2) 6 9 0	
	(3) 26 4 0		(3) 5 14 6	
	(4) 28 14 0		(4) 10 8 0	
1907-08 ..	(5) 23 10 0	26 14 6	(5) 5 4 0	
	(1) 31 8 0		(1) 5 4 0	8 0 4
	(2) 21 0 0		(2) 7 2 6	
	(3) 26 4 0		(3) 9 3 0	
1911-12 ..	(4) 28 14 0	31 8 0	(4) 10 8 0	
	31 8 0		10 8 0	10 8 0
	31 8 0		10 8 0	10 8 0
	36 12 0		10 8 0	10 8 0
1915-16 ..	31 8 0	31 8 0	21 0 0	21 0 0
1919-20 ..	36 12 0	36 12 0		
1923-24 ..	31 8 0	31 8 0		

NOTE :—Figures in brackets refer to various soils of different classes of the same kind of soil.

TABLE LVII.—*Statement showing Sale Rates in Seers per Rupee of the Chief Crops in Tehong.*XIV.
A. 6.

YEAR.	Wheat.	Gram.	Maize.	Gur.	Cotton.
1896 .. .	19	23	12	12	4
1900 .. .	14	13	19	16	8
1904 .. .	22	30	37	11½	9
1908 .. .	12	10	13½	8½	8
1912 .. .	15	15	24	10	2
1916	14	14	14	7	4
*1920	8½	10	10½	5½	6½
*1924	12	14½	12	5½	4

As no sale rates of the chief produce are available even from the Circle Note Book, further back than 1896, for the purpose of comparison, 1896 and 1924 have been taken as the standard years in both cases.

The figures of rent show that *chahi* rents have fallen by 2·04 per cent., and *barani* rents have risen by 167·7 per cent. On the other hand, the price of wheat has risen by 58·3 per cent., gram by 37 per cent., and *gur* by 130·7 per cent. ; maize and cotton show no rise.

XIV.
A. 7.

7. No *zabti* rents are paid on particular crops here.

XIV
A. 8.

8. There is no case of an owner taking fixed grain rents irrespective of the state of the crop, except in the case of N., who takes four seers of *gur* in addition to cash rent from his tenant, who is growing cane.

XIV.
A. 9.

9. Owners do not give any advances to tenants in cash or kind for land already under good cultivation. Non-cultivating owners, in order to raise the value of certain plots, which have remained neglected and unremunerative, try to attract tenants on favourable terms. H. S., for example, wanted to bring under cultivation 10 *kanals* of *banjar kadim* lying close to his well. The plot was in a position to be manured naturally. He made a contract with J., his tenant, to bring it under cultivation on condition that the latter could have the whole of the produce for one year.

* The sale rates of the produce in the village are available only for 1920 and 1924. Other entries have been taken from the Circle Note Book.

It is not common for owners to lend seed to their tenants ; the latter provide it themselves. If a tenant for some reason or other borrows seed from an owner, the latter recovers only the amount lent, no additional charge being made when the crops come in. XIV
A 9

10. Holdings here are scattered and so is cultivation. The cultivators, therefore, do not live on the land but return home to the village after work. The tenant receives the material and site for a house free. Fuel he gets as a customary right. He must get the consent of the owner to cut branches off the trees for fencing, but he generally puts to his own use the dry fuel of these fences after the removal of the crops. The tenant has the right to use water for any purpose, and he has the right to use in equal shares with the owner the natural products of the soil such as grass ; but in practice the owner does not often take any share, and he has no concern with them in the case of a tenant under contract or lease. XIV
A.10

11. The exercise of the rights mentioned above is strictly limited to the requirements of the tenant, who has no right of sale ; actually the tenant avails himself of opportunities which escape the owner's notice to sell grass, fuel, etc., collected from the land. XIV
A.1

12. The tenant has no right whatever to the use of trees on the land, except with the permission of the owner. He does not plant new trees. XI
A.1

13. The tenant does not make any gift of animal produce such as milk, eggs and poultry, to the owner. XI
A.1

14. Generally the owner does not make any gift to the tenant, *e.g.*, a meal at the principal holiday, after harvest, or on a marriage. Large and well-to-do owners who call upon the services of their tenants apart from cultivation, as will be mentioned later, do entertain such tenants on a marriage. XI
A.1

15. Neither owner nor tenant makes any gift such as a meal at harvest times to the labourers. XI
A 1

16. Small non-cultivating owners of agricultural tribes occasionally render personal aid to their tenants in operations such as weeding, fencing and reaping for three to six days in a year, with a view to enhancing the yield and hence their share. The owner feeds himself in these days, making no claim for a special share in the produce as remuneration for the aid rendered. Large owners do not render any such services ; their tenants must do everything themselves. XI
A 1

- XIV
A 17
& 18 17 & 18. Tenants assist comparatively big owners in various ways to the extent of from three to six days in a year with a view to retain a tenancy. Cultivating owners take assistance in such operations as reaping, weeding, manuring and ploughing. In the last two operations the yoke of the tenant are also used. Non-cultivating owners receive assistance in sowing, reaping, carting fodder crops for their live-stock, repair work and in grinding grain with the tenants' cattle. When such assistance is being rendered the owner gives food to the working members, men and cattle. *Gur*, which is a luxury for agriculturists, is usually included in the fare.
- XIV
A 19 19. Grazing is no part of tenancy here.
- XIV
A 20. 20. In the case of a contract or lease the tenant can grow what he likes, but in the case of *batar* the owner exercises a real influence in directing the rotation and the selection of crops. Observation brought to light instances of owners insisting on a particular crop being grown in a certain rotation. H. S., for example, being in need of fodder, insisted on a *senji metha* fodder crop being grown on a plot after maize, although his tenant wanted to grow gram with a view to saving work.
- XIV.
A. 21. 21. The customary practice is that when the crop is cut, all, including *kamins*, graze their cattle indiscriminately on the fields.
- XIV
A. 22. 22. Dung dropped by cattle in the course of grazing is not claimed either by owner or by tenant. The wives and children of *kamins*, such as weavers, *chamars* and *faqirs*, however, collect the dry dung from the fields to serve as fuel and nobody objects to the practice.
- XIV.
A. 23. 23. There is no custom by which the tenant must grind his grain at the owner's mill.
- XIV.
A 24. 24. There are no conditions forbidding the cultivation of part of the lands under tenancy, such as the reservation of lands for grazing.
- XIV.
A. 25. 25. The owner has the right to visit the fields and view the crops; he often directs the tenant to weed, fence, water and reap the crop.
- XIV.
A. 26 26. Owners have been known to give warnings of a threatening nature to their tenants when the cultivation did not meet with their approval, and even to evict them for bad cultivation and faulty rotation.

B —BATAI RENTS.

1. The difference in soils does not affect *batai* rates.

2. *Batai* rates do not vary with crops like sugarcane, cotton, wheat; the shares are half and half. Vegetable crops like tobacco, are grown only rarely on *batai*, but usually on cash rents. If grown on *batai*, the tenant takes $\frac{2}{3}$ and the owner $\frac{1}{3}$ of the produce; only one case was found in which a vegetable crop was subject to half *batai*. The tenant grew one *kanal* of carrots, and enjoyed concessions from the owner; he was allowed three *kanals* of *senji* fodder without having to share it; further, it is probable that in practice he took more than half of the vegetables—at least the owner complained of this. Fruits like mangoes are never subject to *batai* rates; the practice is for the owners to sell the fruit on the tree when it is in an early stage of growth, and the price is paid within a week. In addition to the cash paid, a certain amount of the fruit is reserved, the amount depending roughly on the price paid. In 1925 the only mango garden of the village was sold for Rs. 225/- and 3 maunds 8 seers of fruit. Last year it sold for Rs. 150/- and 1 maund 24 seers of the fruit.

4. No additional cesses of any kind are paid to the landlord.

5. The crop is divided on the threshing floor and the tenant carries the owner's share to the latter's granary.

6. Details are given below of some actual partitions of *rabi* harvest, which the investigator witnessed.

1. *U. S., owner; J., tenant.*—The wheat heap was divided by the tenant in the presence of the owner, by means of scales and a 4-seer weight, into two equal portions of 16 maunds each, some 5 seers of grain being left unweighed. From this common and unweighed residue one *dharu*, or 4 seers of grain, was given to the *rakha* (watcher) who was present, and the rest of the grain was divided, handful by handful, to the owner's and tenant's heaps. No deduction whatever was made for the menials. The owner was then given the choice of selecting the heap he preferred. *Ghundis*, or grain mixed with rough pieces of straw, was also similarly weighed and divided into equal portions.

2. *B. S., owner; A., tenant.*—The weighing method was the same as above. 12 maunds *kachcha* of grain were put into the owner's and tenant's bags respectively. The rest of the grain was weighed into the bags of each, maund by maund, till there was a quantity too small to be weighed by means of the 4-seer weight. The scales were then tested

XIV
B. 1
XIV
B. 2.

XIV
B. 4

XIV
B. 5

XIV
B. 6

XIV.
B. 6. and the remainder of the grain was put into the pans, grain against grain, carefully till the beam was quite horizontal. *Ghundis* were also partitioned similarly. Inquiry from *kamins* and *maliks* showed that payments to *kamins* are made later at home from the individual portions.

3. *U. S. owner ; M., tenant.*—The grain and *ghundis* were weighed by the tenant into two heaps of the same weight and the owner selected one for himself. Nothing was given to any one from the common heap. Before weighing was begun the counterpoise was removed and to avoid any possible error pans were changed half way through the weighing operations.

4. *H. S., owner ; B., tenant.*—The owner's bailiff or supervisor weighed the heap into two equal portions of 17 maunds *kachcha* each. Then from each share, half a seer *kachcha* per maund was taken and given to the bailiff, who thus received 17 seers *kachcha*. *Ghundis* were also partitioned into two equal portions, but no share was given to the bailiff.

One more case of division of their crops was observed, and this time the grain and *ghundis* were equally partitioned, and nothing was given to anyone else. The owner complained to the tenant about his carelessness, negligence and dishonesty and said, "In future you will not get any land." The tenant later, in the absence of the owner, ventilated his grievance about the deductions for the bailiff saying, "I would rather seek some other owner." Next day the owner said that he would not have deducted anything from the tenant's share had he worked satisfactorily. Payments to the menials, as has been pointed out earlier, are made at home from the respective shares of the owner and tenant, or, if at the time of partition, from the respective shares and not from the common heap.

If the cultivator keeps a *chamar* under the *sepi* system, (often he does not), the *chamar* has the right to sweep the floor after every threshing; otherwise the cultivator does it himself. Each sweeping brings in $\frac{3}{4}$ to $1\frac{1}{2}$ seers of grain, besides 5 to 10 seers of straw, according to the size of the heaps of grain and straw.

Straw or *bhusa* is piled into an oblong heap. The middle is then measured out with a rope, which is thrown across the heap to divide it into two equal parts. The owner then selects one for himself and the tenant takes the other.

XIV.
B. 7. 7. For the menials no deduction is made from the common heap, except sometimes for a *rakha* and bailiff, as mentioned above.

The tenant threshes the owner's share and receives no concession for this. In the case of maize, however, the cobs are only separated from the stalks and partitioned; the threshing is done later by the owner himself. The tenant does the reaping, and, if a *chamar* or *lava* (thresher) is summoned to assist, it is done with the consent of the owner. The *lava* takes one bundle of the crop, usually heavier than other bundles, plus $\frac{1}{3}$ th of a bundle as his customary charge. Gleaning is generally done by *chamar* women, but the *lava*'s womenfolk have prior rights. The tenant does not receive any dues for reaping. XI B

8. It has been noted that the *rakha* and a bailiff are paid from the common heap. Both of them are expected to keep a watch on the crops to prevent damage and theft; this involves service both to the owner and the tenant. What goes to charity is not taken from the common heap at the time of partition, but from the common crop when it is being out. The menials, *jhuwar*, barber, *khakrob*, *mirasi* and sweeper, visit the fields to render service and receive *kalavas* known as *kah*. Usually the owner, who is present to supervise, gives this charity to his own menials. Some of the menials are sometimes common to both the owner and the tenant. Such charity is given by an individual tenant only once to the extent of from one to two sheaves in accordance with the size of the area cropped and the condition of the crop itself. The menials render personal service to reapers on the plot, e.g., supplying water, fire for *hukka*, shaving, etc. The owner finds the menials ready to respond to his call for ordinary everyday jobs. XIV B 8

9, 10, 11 & 12. The tenant provides the seed and nothing is deducted on account of seed from the common heap; there are no other deductions not mentioned above. XIV B. 9, 10, 11 & 12

13. *Chari* fodder crop is largely grown on cash rents, although *batai* cultivation also exists. It is divided into equal shares both green and dry. The area cropped is, after considering the uniformity of growth, marked into two equal parts when standing in the field and the owner takes one but the tenant does not undertake the reaping and carrying in this case. If the ripe or dried crop is divided, the reaping and carrying of the owner's share is generally done by the tenant: the sheaves are bound and divided into two equal shares. *Senji* fodder is dealt with similarly. XIV B 13

14 & 15. The landlord does not allow any concession for fodder, nor does he allow the tenant a plot for vegetables for his own XIV B. 14 & 15

XIV. consumption. The owner takes half of all produce including catch crops.
 B. 14
 & 15. It should be noted, that as the tenant is the cultivator he has greater opportunities of cheating than the owner. Secretly he may cut a sheaf of fodder here and there for his own use, or pull canes from the field under *batai* when he has land of his own under the same crop near by, or remove grain sheaves to his own floor. Such doings, however, cannot fail to be noticed occasionally. Tenants also tend to devote more attention to their own land and neglect the cultivation under share tenancy. Where mutual confidence exists between tenant and owner, the latter may allow the former concessions in several matters, *e.g.*, a *kanal* or two of fodder crop, unshared wood from the land for fuel and implements. Big owners, who take service from tenants are occasionally lenient towards them; the latter do not give any gift of animal produce in return.

XIV. 16. Straw of wheat, *berra*, gram, barley and pulses, is divided into
 B. 16. equal shares, as are also the stalks of the maize crop after the separation of the cobs.

XIV. 17. The tenant is at liberty to sell his share of fodder or straw after,
 B. 17
 & 18. but not before, the partition has been settled with the owner, who does not impose any conditions regarding the area or the kind of fodder crops to be grown.

XIV. 19. No changes worthy of note have occurred in *batai* rates during the
 B. 19. past 20 years, as is clear from the following statement extracted from the *Lal Kitab* :—

TABLE LVIII.—Showing Rates prevalent on Holdings under *Batai* Tenancy in Tehong.

YEAR	Holdings.	Total	Chahr	Barani	Batai rates.
		Acres	Acres.	Acres.	
1903-04 ..	816	688	259	429	$\frac{1}{2}$
1907-08 ..	738	757	306	451	$\frac{1}{2}$; one case of $\frac{2}{5}$
1911-12 ..	665	714	275	439	$\frac{1}{2}$
1915-16 .	809	753	274	479	$\frac{1}{2}$
1919-20	776	804	342	462	$\frac{1}{2}$; one case of $\frac{1}{3}$
1923-24 ..	779	823	343	480	$\frac{1}{2}$; one case of $\frac{1}{3}$

The case in which the owner has received less than $\frac{1}{2}$ is that of a *sonjidar*, who has let his land for growing tobacco. XIV. B 19.

20. Mortgagees do not charge different rates of *batai* than owners. XIV. B 20.

21. The *batai* tenures always run from year to year; it may be that the same tenant cultivates a certain plot on *batai* for several years, but he has to obtain the consent or permission of the owner annually. XIV. B.21.

22. There is no instance of a share tenant sub-letting to another. XIV. B.22.
If, on account of disability, a tenant fails to cultivate a plot which in the interest of the owner he wants to hand over to a third person, he cannot do so without giving notice and obtaining the assent of the owner, since the owner has let to a share tenant in accordance with his impression of him as a cultivator.

23 & 24. Correct information regarding the shares of landlord and tenant is available only for one year 1923-24, and for three holdings under *batai*. In order to ascertain the area of the holding and the crops grown during the year, the *khassra girdawari* records were studied and the results worked out as below— XIV. B 23 & 24.

Case No. 1.

Area cultivated by the tenant: 20 *kanals* 6 *marlas* of *chahi* land.

	Rs.	a.	p.
Total amount of maize 21 mds. 24 srs. produced from the plot and valued at 12 seers a rupee (the price current in the village at harvest time)	72	0	0
4 cart-loads (light) of maize fodder valued at Rs. 4/- per load	16	0	0
<i>Senji</i> fodder valued at Rs. 4/8/0 per <i>kanal</i> (the rate at which the owner actually sold his own share) ..	91	5	7
<i>Total price of the produce obtained during the year</i> ..	179	5	7
As the shares of the landlord and the tenant were equal, the value of the produce of the landlord's share (rent) ..	89	10	9
Average rent per acre	46	6	7

Case No. 2.

XIV.
B. 23
& 24.

Area cultivated by the tenant : 7 *kanals* 6 *marlas* of *chahi* land.

	Rs.	a.	p.
The landlord's share ($\frac{1}{3}$) in price of melons sold ..	7	0	0
1 $\frac{1}{5}$ maunds of cotton : the owner's share, valued at 4 seers			
a rupee	12	0	0
Dry cotton plants—owner's share, 4 bundles valued at .	0	8	0
<i>Senji</i> fodder which the landlord sold from his $\frac{1}{2}$ share ..	7	8	0
<i>Total value of the produce of the landlord's share (rent)</i> ..	27	0	0
Average rent per acre cultivated	38	13	4

Case No. 3.

	Rs.	a.	p.
Area cultivated by the tenant : 7 <i>kanals</i> of <i>chahi</i> land.			
Total wheat produced by the tenant, 8 maunds valued at			
8 seers a rupee	40	0	0
14 <i>tangars</i> of straw valued at one <i>tangar</i> per rupee ..	14	0	0
<i>Total price of the produce obtained during the year</i> ..	54	0	0

As the shares of the owner and the tenant were equal,

the value of the owner's (rent)	27	0	0
Average rent per acre cultivated	40	8	0

CHAPTER XV.

EXPENSES OF CULTIVATION.

1. (a).—PARTICULAR HOLDINGS.

For the purpose of ascertaining the expenses of cultivation, four specific holdings were examined ; three owners' and one tenant's. The information desired could be obtained only in the case of one tenant's holding, as out of the four cultivating tenants in the village, one has migrated to the Canal Colonies, and two began cultivation only last year, hence the only remaining case has been investigated.

XV.
1. (a)
Case
1.

Case No. 1.

J., a tenant cultivator.

TABLE LIX A.—Statement showing Areas Sown with Kharif Crops in the last Five Years by J.

Year	Area sown with particular crop.	KHARIF.					
		Chahi.			Barani		
		Matured	Kharaba	Rent payable	Matured	Kharaba	Rent payable.
	*Ks. Ms.	*Ks Ms	*Ks Ms		*Ks. Ms.	*Ks Ms.	
<i>Chari fodder</i>							
1920 ..	1 12		.	.	1 0	0 12	$\frac{1}{2}$ batai
1921 ..	24 17	2 19	..	$\frac{1}{2}$ batai	21 18	.	"
1922 ..	29 18	..	..	..	29 18	.	"
1923 ..	26 7	..	..	..	{ 3 3	..	Owned
1924 ..	46 0	..	..	..	{ 23 4	..	$\frac{1}{2}$ batai
					35 0	11 0	"
<i>Average for 5 years.</i>	25 15	0 12	..	.	22 17	2 6	
<i>Maize.</i>							
1920 ..	.	..	..		..	..	..
1921 ..	10 7	10 7	..	$\frac{1}{2}$ batai.	..	..	..
1922 ..	10 17	10 17	.	"	..	..	..
1923 ..	10 17	10 17	..	"	..	..	..
1924 ..	20 6	20 6	..	"	..	..	..
<i>Average for 5 years.</i>	10 9	10 9	..	..	..	..	..

(Continued).

* Ks. =kanals ; Ms. =marlas : 20 marlas=1 kanal ; 10 $\frac{3}{4}$ kanals=1 acre.

(Concluded).

XV.
1. (a).
Case
1.

Year.	Area sown with particular crop.	KHARIF.					
		Chahn.			Barani.		
		Matured	Khara- ba.	Rent payable	Matured	Khara- ba.	Rent payable.
Cotton only in 1923.	Ks. Ms. 2 4	Ks. Ms. ..	Ks Ms .		Ks. Ms. 2 4	Ks Ms. .	$\frac{1}{2}$ batar
Kamad.							
1920 ..	..	..	..	..	..	..	..
1921 ..	..	..	..	..	..	..	..
1922 .	1 10	1 10	.	$\frac{1}{2}$ batar	..	..	..
1923 .	1 10	1 10	..	Rs. 2/- per kanal	..	..	..
1924 ..	4 0	4 0	..		..	..	.
Average for 5 years.	1 8	1 8	.		.	.	..
San							
1920 ..	0 5	..		..	0 5	..	$\frac{1}{2}$ batar
1921 ..	1 0	..	..		1 0	.	"
1922 .	1 10	.			1 10	.	"
1923 .	1 0	.			1 0	.	"
1924 ..	1 0	1 0	..	$\frac{1}{2}$ batar.	.	.	.
Average for 5 years.	0 19	0 4	.	.	0 15	..	..
Chillies.							
1920 .	1 4	1 4	..	$\frac{1}{2}$ batar	..	..	..
1921 ..	0 5	0 5	.	"	..	.	.
1922 ..	..	..	..	"	..	.	..
1923 .	0 10	0 10	..	$\frac{1}{2}$ batar.	.	.	..
1924 .	..	.		..	..	..	..
Average for 5 years.	0 8	0 8	..	..	..	.	.
Water Melons.							
1920 ..	4 5	..	..	..	4 5	..	$\frac{1}{2}$ batar
1921 ..	..	..	..	..	..	.	..
1922 ..	2 5	..	..	..	2 5	..	$\frac{1}{2}$ batar
1923 ..	..	..	..	..	..	..	..
1924 ..	..	..	..	.	..	..	.
Average for 5 years.	1 6	..	..	.	1 6	..	..
Mash only in 1920. ..	0 5	..	..	.	..	0 5	$\frac{1}{2}$ batar
Vegetables only in 1923. ..	0 10	0 10	..	$\frac{1}{2}$ batar	..	..	..
Sweet Potatoes only in 1922.	1 10	..	..	..	1 10	..	$\frac{1}{2}$ batar.

TABLE LIX. B.—Statement showing Areas Sown with Rabi Crops in the last Five Years by J.

Year	Area sown with particular crop.	RABI						XV 1. (a). Case 1.
		Chahr.			Barani.			
		Matured	Khara- ba	Rent payable.	Matured	Khara- ba.	Rent payable	
	*Ks. Ms.	*Ks Ms	*Ks. Ms.		*Ks Ms	*Ks. Ms		
<i>Wheat.</i>								
1921	8 2	2 19	..	$\frac{1}{2}$ batar.	$\begin{Bmatrix} 3 & 3 \\ 2 & 0 \end{Bmatrix}$	..	Owmed. $\frac{1}{2}$ batar.
1922	8 10	5 7	..	"	$\begin{Bmatrix} 3 & 3 \\ 3 & 3 \end{Bmatrix}$	..	Owmed.
1923	8 10	5 7	.	"	$\begin{Bmatrix} 3 & 3 \\ 3 & 3 \end{Bmatrix}$.	"	
1924	65 18	6 2	..	"	59 16		$\frac{1}{2}$ batar.	
1925	15 7	4 7		"	7 0	4 0	..	
<i>Average for 5 years</i>	21 5	4 16			15 13	0 16	.	
<i>Wheat and Gram.</i>								
1921	.		.	.	69 6	4 0	$\frac{1}{2}$ batar	
1922	73 6	..	.	.	79 10	.	"
1923	79 10	..	.	.	4 0	..	"
1924	4 0	..	.	.	21 16	29 4	"
1925	51 0		.	.				
<i>Average for 5 years</i>	41 11	..	..	..	34 18	6 13	..
<i>Gram</i>								
1921	.	.	.	..	..	1 0	$\frac{1}{2}$ batar
1922	1 0	..	.	..	..	..	..
1923	..	.	..	..	..	..	..
1924	..	..	..	..	..	..	..
1925	12 0	..	.	.	3 0	9 0	$\frac{1}{2}$ batar
<i>Average for 5 years</i>	2 12	.	.	..	0 12	2 0	..
<i>Barley</i>								
1921	.	.	.	..	..	..	..
1922	..	.	.	..	..	..	..
1923	7 0	..	..	..	6 0	1 0	$\frac{1}{2}$ batar.
1924	20 0	..	..	..	14 0	6 0	"
1925	1 0	..	..	..	..	1 0	..
<i>Average for 5 years</i>	5 12			.	4 0	1 12	..	
<i>Vegetables.</i>								
1921	..	.	..	..	.	..	..
1922	.	.	..	..	..	..	..
1923	..	.	.	..	..	..	..
1924	5 2	5 2	..	$\frac{1}{2}$ batar	..	..	..
1925	1 4	1 4	.	"	..	..	..
<i>Average for 5 years</i>	1 5	1 5	..	..			.
<i>Senji metha.</i>								
1921	1 14	1 14	..	$\frac{1}{2}$ batar	..	.	..
1922	7 19	7 19	..	"	..	.	..
1923	13 7	7 0	..	"	3 0	3 7	$\frac{1}{2}$ batar.	
1924	10 11	8 11	..	"	2 0	..	"	
1925	16 0	16 0	..	"	..	..	.
<i>Average for 5 years</i>	9 18	8 5	..	..	1 0	0 13	..

XV. (ii) The working members in the family are 2 males, aged 45 and 14 years, and 3 females aged 40, 17 and 30 years, respectively; the last mentioned, however, worked with the family for about 3 months only.

1. (a). Case.

1.

(iii). There were no partners in cultivation

(iv). Details of payments in cash or kind, service rendered, hours and days of work, are now given.

TABLE LX.—*Statement giving Details of the Labour employed by J. on his Holding.*

Crop.	Persons employed.	Time taken.	Service rendered	Payment made.	REMARKS.
		Hrs Mts			
Maize. (20 ks. 6 ms.).	Labourer	40 0	Weeding	Food for 4 days three times a day.	He was a relative of J. and rendered assistance out of regard for him. One man can weed 2 to 3 <i>kanals</i> of maize in a day of 10 hours; only 2 men were employed and they weeded 5 <i>kanals</i> in 10 hours.
	Labourer	24 0	Reaping, collecting and carrying to the yard; also miscellaneous work.	2 bundles of the harvest containing about 20 seers of dry grain from common produce; also fodder and grainless cobs	Valued at— Rs a. p Grain 1 10 8 Fodder 0 6 0 Total 2 0 8 One man reaps 8 <i>kanals</i> in 12 hours; only 2 men were employed.
	Lohar and Tankhan.	..	Customary duties.	2 bundles from common harvest. 32 seers from J.'s own share.	Valued at— Rs a. p Grain 1 10 0 Fodder 0 6 0 Total 2 0 0 Valued at Rs. 2/10/8.
Charifodder. (46 ks. 0 ms.)	Lohar and Tankhan.	..	Customary duties.	2 bundles from J.'s own share.	Valued at 5 annas.

(Concluded).

Crop.	Persons employed.	Time taken.	Service rendered	Payment made.	REMARKS.	XV. 1. (a). Case 1.
<i>Kamad</i> (Sugarcane). (4 ks. 0 ms.)	<i>Chamar</i>	Hrs Mts 72 0 (12 hrs a day—6 days).	Assisted in cutting and cleaning canes, boiling juice; also miscellaneous work	4½ seers of <i>gur</i> plus food for 6 days, also 1½ seers of juice for drinking every day, 4 canes and wash and impurities of pan every day, also 1 <i>tangai</i> of trash and <i>megas</i>	Value of payments made— <i>Gur</i> 0 14 5 Food 1 2 0 Juice 0 9 0 Canes 0 1 6 Wash of pan 0 12 0 Trash and <i>megas</i> 0 8 0 <i>Total</i> 3 14 11	
	<i>Lohar and Tarkhan.</i>	..	Customary duties.	4½ seers of <i>gur</i> plus 8 seers of juice to both	Valued at — <i>Gur</i> 0 14 5 Juice 0 8 0 <i>Total</i> 1 6 5	
Wheat (15 ks. 7 ms.)	Two labourers	32 0 (8 hrs a day—4 days)	Weeding	Food for 4 days.	Cost of food. Re. 1/8/0 They were relatives of J.	
	<i>Lohar and Tarkhan</i>		Customary duties.	2 bundles from common harvest. 4 maund of grain	Valued at.— Rs. a p. Grain 1 8 0 Bhusa 0 10 8 <i>Total</i> 2 12 8 Valued at Rs. 4/-	
<i>Senji metha</i> fodder. (16 ks. 0 ms.)	<i>Lohar and Tarkhan</i>	..	Customary duties.	2 bundles of the crop.	Valued at 8 annas.	

(v) Details are now given of the cattle employed in cultivation on the holding with their other duties throughout the year.

TABLE LXI.—Statement giving Details of Work performed by Cattle in connection with Cultivation on J's. Holding.

Crop.	No of cattle employed.	Time taken.	Work performed.	REMARKS.
		Hrs. Mts.		
Maize. (20 ks. 6 ms.)	4 cattle, viz, 3 oxen and one buffalo in 2 yoke.	23 40	Ploughed 3 times, including sowing time.	The two yoke of cattle ploughed 6 kanals in 2 hrs. 20 mts., excluding stoppages.
	Do.	5 0	Used <i>sohaga</i> twice.	Working time observed by investigator.

(Continued).

XV.
I. (a).
Case
I.

Crop.	No. of cattle employed	Time taken.	Work performed.	REMARKS.
Maize—contd.	4 cattle, one yoke at work, one at rest	Hrs. Mts 101 30	Worked a well 4 times	The cattle irrigated 4 <i>kannals</i> of land in the <i>Bet</i> in 5 hours: irrigation by bucket wheel.
	Do	8 0	Carrying home tenant's and landlord's share of cobs and fodder (8 cart-loads)	Each trip of the cart to the field and back, excluding stoppages, took one hour.
	4 cattle in 2 yoke.	5 0	Threshing and crushing tenant's share of cobs	Threshing was finished by beating with heavy sticks
Chara fodder (46 <i>ks.</i> 0 <i>ms.</i>)	4 cattle in 2 yoke	18 0	Ploughing for sowing only.	Working time calculated as for maize above
	Do	5 40	Used <i>sohaga</i> once.	Do.
	4 cattle, one yoke at work, one at rest	2 0	Carrying home tenant's and landlord's share of fodder (2 cart-loads).	Each trip took one hour, excluding stoppages.
Kamad. (Sugarcane). (4 <i>ks.</i> 0 <i>ms.</i>)	4 cattle in 2 yoke.	9 20	Ploughing 6 times, including sowing time.	Time calculated as for maize above.
	Do.	10 50	Used <i>sohaga</i> 22 times	Time calculated as for maize above
	4 cattle; one yoke at work, one at rest.	25 0	Worked a well 5 times.	Irrigation was by bucket wheel in the <i>Bet</i>
	Do.	4 0	Carting canes to the yard (6 cart-loads).	Each trip took 40 mts., excluding stoppages
	Do.	36 0	Pressing	One earthen jar was filled in $1\frac{1}{2}$ hours. The yield of juice was 24 jars.
San. (1 <i>k.</i> 0 <i>ms.</i>)	4 cattle in 2 yoke.	0 24	Ploughing for sowing only.	Time calculated as for maize above
	4 cattle; one yoke at work, one at rest.	3 45	Worked a well 3 times.	Irrigation was by bucket wheel in the <i>Bet</i> .
	Do.	1 0	Carting the <i>san</i> to the pond for retting.	One trip only.

(Continued):

(Continued).

XV.
1. (a).
Case
1.

Crop.	No. of cattle employed.	Time taken.		Work performed.	REMARKS.
		Hrs	Mts		
Wheat (<i>Chahs</i>) (4 ks. 7 ms) (<i>Barani</i>) (11 ks. 0 ms)	4 cattle in 2 yoke.	6	4	Ploughed 3 times	The two yoke of cattle ploughed $2\frac{1}{2}$ kanals in 1 hr. 10 mts. Wheat requires more careful ploughing and consequently takes more time.
	Do	1	4	Used <i>sohagu</i> twice	Time calculated as for maize above.
	4 cattle; one yoke at work, one at rest	10	52	Worked well twice.	Irrigation was by bucket wheel in the <i>Bet</i> .
	4 cattle in 2 yoke	25	40	Ploughed 5 times.	Time calculated as for <i>chahs</i> area above.
	Do	2	42	Used <i>sohagu</i> twice	Time calculated as for maize above.
Wheat and Gram (<i>Barani</i>) (51 ks. 0 ms.)	4 cattle in 2 yoke.	61	12	ploughed 3 times	The two yoke ploughed $2\frac{1}{2}$ acres in one hour, excluding stop pages
	Do	13	0	Used <i>sohagu</i> twice	One complete trip of the cart took 40 mts
	4 cattle, one yoke at work, one at rest	3	20	Carrying harvest to threshing floor (5 cart-loads)	100 sheaves were crushed and threshed by 4 cattle in 42 hrs., excluding stop-pages
	4 cattle in 2 yoke	54	36	Threshing the wheat and wheat-gram harvest (130 sheaves)	One trip took 20 mts.
	4 cattle, one yoke at work, one at rest	1	40	Carting tenant's and landlord's shares from the threshing floor to the house. (5 cartloads)	
Gram (<i>Barani</i>). (12 ks. 0 ms)	4 cattle in 2 yoke	9	20	Ploughed twice.	The two yoke of cattle ploughed 3 kanals in 1 hr 10 mts.
	Do.	1	24	Used <i>sohagu</i> once.	Time calculated as for maize above.
	Do.	2	30	Threshing of harvest (2 tangars)	
Barley. (1 k 0 ms)	4 cattle in 2 yoke.	0	24	Ploughed for sowing only.	Time calculated as for maize above.
<i>Senji metha</i> fodder (16 ks. 0 ms)	4 cattle in 2 yoke	6	14	Ploughed for sowing only.	Time calculated as for maize above.
	4 cattle; one yoke at work, one at rest.	120	0	Worked well 6 times.	Irrigation was by bucket wheel in the <i>Bet</i> .
	Do.	10	0	Carting home fodder (10 cart-loads)	<i>Senji metha</i> followed maize mentioned above.
Vegetables (1 k 4ms.)	4 cattle; one yoke at work one at rest.	5	10	Ploughed	Details have been lost.
TOTAL WORK OF ONE YOKE..		430	48	..	..

XV.
1. (a).
Case
1

The work done for the landlord in connection with cultivation was another 9 hours, but unfortunately details for this time have been lost by the investigator. The total working time on cultivation for each of the four cattle, therefore, comes to 439 hours 48 minutes. The time worked by each, apart from cultivation, is $10\frac{1}{2}$ hours, but details for this period are not available either.

J. has 4 plough cattle, *viz.*, 3 oxen and 1 buffalo. A buffalo or bullock is put to use when 3 to $3\frac{1}{2}$ years of age, but usually the buffalo is completely exhausted when it is 10 years of age, the bullock on the other hand is assumed to live 20 years and the average period of its usefulness is about 16 years.

An estimate of the capital cost of the cattle per year is given below.

TABLE LXII.—*Statement showing the Capital Cost per Year of Cattle owned by J.*

Cattle	Purchase price.	Probable working life when purchased	Capital cost per year.	REMARKS.
	Rs	Years.	Rs. a. p.	
1 bullock ..	28	7	4 0 0	Had been used for 9 years when purchased.
1 „ ..	8	16	0 8 0	Purchased while young. Now worked for 13 years
1 „ ..	..	16	..	Calf of his own cow reared at home; now worked for 9 years.
1 buffalo .	4	6	0 10 8	Purchased while young. now worked for 4 years.
Total capital cost of the cattle per year.			5 2 8	.
Average capital cost per head			1 4 8	..

An estimate of the value of fodder J fed to his cattle during the year is given below—

	Rs.
i. 18 <i>tangars</i> of wheat straw (home produced), valued at Re. 1/- per <i>tangar</i> ..	18
ii. 150 <i>pulas</i> (bundles) of <i>chari</i> fodder (home produced), valued at ..	8
iii. 8 <i>kanals</i> of <i>senji</i> fodder—(the landlord's share was bought at Rs. 4/8/0 per <i>kanal</i>), valued at ..	36
iv. 2 cart-loads of maize fodder, valued at ..	8
<i>Total</i> ..	70

This fodder was consumed in ten months. For the remaining two months of the year J. says that he fed the cattle on the *kharaba* (failed land) of *chari* crop and the grass growing thereon. If the cost of feeding for these two months is taken on the same basis as that for the ten months, we get the total cost for the year as Rs. 84/-. No grain was fed to the cattle during the year, but $5\frac{1}{2}$ seers of *gur* (home produced) valued at Re. 1/- was given to them and the expenditure on salt and medicines came to another Rs. 7/-. Thus the total cost of fodder, *gur*, salt and medicine for the year comes to Rs. 92/- for the 4 cattle or Rs. 23/- each. If we include the capital cost per cattle per year, *viz*, Re. $1\frac{1}{4}/8$, we get the total cost of keeping an animal as Rs. 24/4/8. As the average time each animal worked was 450 hours 18 minutes during the year, the cost per animal per hour of work done was about 10 pies. But $10\frac{1}{2}$ hours was spent by each animal in work independent of cultivation, at a cost of Rs. 0/8/9. Excluding this figure from the total cost, we get Rs. 23/11/11 as the cost per cattle for work in connection with cultivation or Rs. 94/15/8 for all the 4 animals.

XV.
1. (a)
Case
1.

(vi) J. did not hire any cattle throughout the year. The practice of taking cattle on hire is not common in the village, though a cultivator will sometimes lend his cattle to others. Non-agriculturists, however, pay 4 annas per *kamal* for the one ploughing necessary for sowing *chari* fodder, which they grow for their cattle. Cattle are never hired for any other agricultural operation.

(vii). J. did not use any manure during the year 1924-25 or in any of the preceding four years as the situation of the holding is such that when it rains it is liable to be flooded with water from the village streets, which contains fertilising matter making the holding as good as *niain*, (the land around the village which receives the night soil). The landlord pays for no part of the manure with a tenant cultivating on cash rent.

(viii). Fodder was neither purchased nor sold during the year; it was only sufficient for the tenant's needs. The values of the fodder used for the cattle during the year have been given in (v) above.

(ix). J. fed no grain to his cattle during the year, but gave them $5\frac{1}{2}$ seers of *gur* valued at Re. 1/-, and this has been considered in (v) above.

XV.
L. (a).
Case
1.

Details of the produce, other than fodder, which he grew during the year are given below :—

	Rs. a. p.
10 maunds 32 seers of maize, valued at 12 seers a rupee	. 36 0 0
8 seers of <i>san</i> , valued at 3 seers a rupee ..	.. 2 13 9
10 maunds 16 seers of wheat, valued at 8 seers a rupee	52 0 0
32 seers of gram, valued at 16 seers for Re 1/8/0	. 3 0 0
16 seers of barley, valued at 12 seers a rupee	. 1 5 3
6 maunds of <i>gur</i> , valued at 16 seers for Rs. 3/-	. 45 0 0
His share of vegetables (12 <i>marlas</i>), valued at Rs 20/- per <i>kanal</i> .. ..	. 12 0 0
<i>Total</i>	.. 152 3 0

(x) The implements used by the cultivator, with details of values are given below ; their cost averages Rs 8/1/6 per year. J. irrigated his *chahi* land during the past five years by means of a bucket wheel set up by his landlord, for this he paid nothing but spent Rs. 1/8/0 last year for lubricating the wheel

TABLE LXIII.—*Giving details of Agricultural Implements used by J.*

Implement.	Time it lasts.	No. in his possession.	Use.	Cost per implement	Average cost per year.	REMARKS.
	Years			Rs. a. p.	Rs. a. p.	
1. <i>Hal</i> (Plough),	4	2	Ploughing.	1 0 0	0 8 0	The cultivator supplies wood to the carpenter, and iron and coal to the blacksmith, who make the implements as part of their contract. For <i>hal</i> or <i>phala</i> two seers of grain is, however, given to the carpenter.
2. <i>Phala</i> (Ploughshare).	1½	2	„	0 8 0	0 10 8	
3. <i>Patha</i> (Holder of the share).	½	2	„	0 4 0	1 0 0	
4. <i>Pinjah</i> (Wooden yoke)	4	2	Yoking the cattle for ploughing.	0 12 0	0 6 0	
5. <i>Pinjah</i> (Wooden yoke)	4	1	Yoking the cattle for irrigation.	0 12 0	0 3 0	
6. <i>Sohaga</i> (Clod crusher).	4	1	Levelling.	2 0 0	0 8 0	
7. <i>Kahr</i> (Spade).	10	1	Digging.	1 8 0	0 2 5	
8. <i>Khuli</i> or <i>gadala</i> (Spade).	10	1	„	1 0 0	0 1 7	

(Continued).

(Concluded).

Implement.	Time it lasts.	No. in his possession.	Use	Cost per implement	Average cost per year.	REMARKS.	XV. 1. (a). Case 1.
	Years.			Rs. a. p.	Rs. a. p.		
9. <i>Kulhari</i> (Small axe)	10	1	Chopping wood	0 6 0	0 0 7		
10. <i>Ramba</i> or <i>khurpa</i> (Trowel)	$\frac{1}{2}$	3	Hoeing and cutting grass.	0 4 0	1 8 0		
11. <i>Daranti</i> (Sickle).	4	3	Cutting harvest and grass.	0 4 0	0 3 0		
12. <i>Dat</i> (Sickle without teeth)	10	1	Cutting fodder.	0 4 0	0 0 5		
13. <i>Gandasa</i> (Chopper)	3	1	"	0 8 0	0 2 8		
14. <i>Bangri</i> (Hoe)	3	2	Hoeing	0 4 0	0 2 8		
15. <i>Sangri</i> (2-pronged fork)	2	1	Scattering harvest on the threshing floor.	0 3 0	0 1 4		
16. <i>Tangli</i> (4-pronged fork)	4	2	Collecting <i>bhusa</i> at the threshing floor	1 0 0	0 8 0	One purchased for Re 1/- and one exchanged for a sheaf of wheat	
17. <i>Phalla</i> . (Wooden frame-work.)	3	2	Treading harvest	0 4 0	0 2 8		
18. <i>Tangar</i> (Rope net)	6	2	Carrying <i>bhusa</i> .	3 8 0	1 2 8	Home made If <i>san</i> is not produced, it is purchased.	
19. <i>Pore</i> (Tube)	15	2	Sowing with the plough.	0 8 0	0 1 1	Purchased.	
20. <i>Chhukhi</i> (Muzzle).	3	4	Muzzling cattle.	0 2 0	0 2 8	Made at home from <i>san</i> .	
21. Basket	$\frac{1}{2}$	1	Carrying <i>bhusa</i> , etc	0 3 0	0 6 0	Purchased.	
			Average cost per year.	..	8 1 5	..	

(xi). No implements were hired during the year.

(xii) The cultivator hired a cane-pressing machine, together with the necessary apparatus for pressing the cane and making *gur*, at the rate of three annas for the preparation of two earthen jars of juice. The expenses involved in making six maunds of *gur* were:—

	Rs. a. p.
Use of apparatus .. ..	.. 2 4 0
Oil for lubricating the machine ..	.. 0 3 0
Soda for the purification of the juice ..	.. 0 6 0
<i>Total</i> ..	<u>2 13 0</u>

XV. (xiii). Salt and medicines for the cattle have been included in (v) above.
 1. (a)₁ Rakhas (watchers) were paid for the year from the common harvest at
 Case 1. the following rates:—

				Rs. a. p
Maize 4 seers, valued at	..	..	..	0 5 4
Wheat 4 „ „ „	..	..	..	0 8 0
			<i>Total</i>	.. 0 13 4

(xiv). The cultivator purchased a second-hand cart a year ago for Rs. 40/-. He spent 4 annas on repairs, and replaced one wheel at a cost of Rs. 4/-. The cart is expected to last four years and will then be worth Rs. 4/- as fuel. The cost of the cart per year may, therefore, be estimated at Rs. 10/1/0. He did not earn anything in cash or kind by plying the cart for hire—a thing he never does. Details are given of the uses in connection with, and independent of, cultivation to which the cart has been put during the year with the time taken in each case.

Work performed in connection with cultivation—

			Hrs. Mts.
Carrying home tenant's and landlord's share of maize cobs and fodder (8 cart-loads)	..	..	.. 8 0
Carrying home tenant's and landlord's share of <i>chara</i> fodder (2 cart-loads)	..	..	.. 2 0
Carting canes to the pressing yard (6 cart-loads)	..		.. 4 0
Carting <i>san</i> to the pond for retting	..		.. 1 0
Carrying wheat and gram harvest to threshing floor (5 cart-loads)	..	..	.. 3 20
Carrying the above from threshing floor to tenant's and landlord's houses (5 cart-loads)	..		.. 1 40
Carting home <i>senji</i> fodder (10 cart-loads)	..		.. 10 0
<i>Total in connection with cultivation</i>			.. 30 0

Work performed independent of cultivation—

Fetching clay for the landlord (4 cart-loads)	..	4 0
„ „ for repairs, etc. (5 „)	..	5 0
„ fuel for the landlord (4 „)	..	4 0
Lending the cart with oxen to relatives	..	10 0
<i>Total independent of cultivation</i>	..	23 0
<i>Grand Total</i>	..	53 0

(xv). Details are given below of seed rates per acre on different kinds of soils used by J,

TABLE LXIV.—*Showing J.'s Seed Rates per Acre on Different Classes of Soil.*

Item.	Chah.		Barani.		Value at sowing time per rupee.	XV. 1. (a). Case 1.
	Rate per kanal	Rate per acre.	Rate per kanal	Rate per acre.		
Maize	Seers 0 8	Seers 8 4	Seers. ..	Seers ..	Seers. 10	
Chari alone or mixed with mung, moth, etc.	2 6	27 3	2.2	23.1	10	
Cotton	0 6	6 3	..	..	9 6	
Sugarcane . . .	12 annas to Re 1	Rs. 7/14/0 to Rs 10/8/0	.	.		
San (hemp)	3.0	31 5	2 4	25 2	Generally it is exchanged for an equal amount of wheat.	
Wheat	3.0	31.5	2 4	25 2	10	
Wheat and gram ..	2 4	25 2	2.0	21.0	10	
Gram .. ..	..	..	1 7	17 8	10.7	
Senyi and metha .	2 4 to 3	25.2 to 31.5	..	..	10	
Barley	3.0	31 5	2 4	25 2	12	
Radish, etc	Re. 0/6/6	Rs 4/4/6	..	..	..

The seed of maize, *chari*, wheat, *senyi* and *san* was home produced. He had borrowed $1\frac{1}{2}$ maunds of gram for sowing from a *Bania* (*Aggarwal*) shopkeeper on the understanding that he would repay $1\frac{1}{4}$ times as much in wheat. Radish and vegetable seed he purchased for 8 annas to sow on $1\frac{1}{2}$ *kanals* of land. All seed used is supplied by the tenant.

(xvi). Expenses of sowing, not included above, were 5 seers of wheat valued at Rs. 0/3/5 and a similar weight of maize of the same value given to the *lohar* and the *tarkhan*.

(xvii). The expenses of weeding have been given in (iv) above. There were no other expenses in this connection.

(xviii). All the harvesting expenses have already been considered in (iv) above.

(xix). All deductions from the common heap at harvest have been considered in (iv) and (xiii) above.

(xx). Threshing and winnowing he did by himself. Expenses of carrying the produce to the landlord's house and to his own granary have already been taken into account in (v) and (xiv) above.

(xxi). In the last five years only 8 annas worth of radish seed was washed away by flood and had to be resown. J. incurred no other extraordinary expenses in the last five years on hedging, re-making of boundaries, etc.

Case No. 2.

XV. The Cultivator K. B. owns 125 *kanals* 19 *marlas* of land: 119
 1. (a). *kanals* 15 *marlas* cultivated, and 6 *kanals* 4 *marlas* uncultivated
 Case
 2.

TABLE LXV. A—Statement showing Areas Sown with *Kharif* Crops
 in the last Five Years by K. B.

Years.	Area sown with particular crop.	KHARIF					
		Chahr			Barani		
		Matur- ed	Khara- ba	Rent payable.	Matur- ed.	Khara- ba	Rent payable
	*Ks Ms	*Ks Ms	*Ks Ms.		*Ks Ms	*Ks Ms	
<i>Chari fodder</i> —							
1920 .	24 4	1 5	..	Owned	{ . 10 3 2 18 9 18		Owned Re. 1/- per kanal
1921 .	21 10	2 16	..	"	{ 4 10 14 4	..	" Owned.
1922 .	23 19	1 14	..	"	{ 20 18 1 7	..	" Re 1/ per kanal
1923 ..	20 14	1 5	..	"	19 9	.	Owned.
1924 ..	27 6	1 3	..	"	26 3	.	"
<i>Average for 5 years.</i>	23 11	1 13	.	..	17 18	4 0	.
<i>Maize</i> —							
1920 ..	7 16	6 2	1 14	Owned	..	..	.
1921 ..	3 19	3 19	..	"	..	..	.
1922 ..	10 16	10 16	.	"	..	..	.
1923 ..	14 0	4 18	9 2	"	..	..	.
1924	10 1	10 1	..	"	..	..	..
<i>Average for 5 years.</i>	9 6	7 3	2 3	..	..	..	..

(Continued.)

* Ks. = *kanals*; Ms. = *marlas*: 20 *marlas* = 1 *kanal*; 10³/₅ *kanals* = 1 *acre**

(Concluded.)

XV.
1. (a).
Case
2.

Years.	Area sown with particular crop.	KHARIF.					
		Chaks			Barani.		
		Matured.	Khara- ba.	Rent payable	Matur- ed.	Khara- ba.	Rent payable.
<i>Kamad —</i>	<i>Ks. Ms.</i>	<i>Ks. Ms.</i>	<i>Ks. Ms.</i>		<i>Ks. Ms.</i>	<i>Ks. Ms.</i>	
1920	4 8	4 8	..	Owned	.	..	..
1921	3 10	3 3	0 7	„	.	.	.
1922	3 6	3 6	.	„	..	.	..
1923	3 15	3 15		„	.	.	..
1924	2 14	2 14		„	.	.	..
<i>Average for 5 years.</i>	<i>3 11</i>	<i>3 9</i>	<i>0 1</i>	..	.	..	..
<i>Cotton—</i>							
1920	4 2	4 2	..	Owned.	..	..	..
1921	3 2	3 2	.	„	..	..	..
1922	..	..	..	..	..	..	..
1923	..	..	..	.	..	..	..
1924	2 8	2 8		Owned.	..	..	..
<i>Average for 5 years.</i>	<i>1 18</i>	<i>1 18</i>	..	..	..	..	..
<i>San only in 1921.</i>	1 3	..	.	..	1 3	..	Owned.
<i>Chillies—</i>							
1920	..	..	..	..	..	..	..
1921	..	..	..	..	..	..	..
1922	0 7	0 7	..	Owned.	..	..	..
1923	0 7	0 7	..	„	..	..	..
1924	..	..	..	..	..	..	..
<i>Average for 5 years.</i>	<i>0 3</i>	<i>0 3</i>	..	.	..	..	..
<i>Mash only in 1921</i>	1 0	1 0	..	..	..	..	..

TABLE LXV. B.—Statement showing Areas Sown with Rabi Crops in the last Five Years by K. B.

XV
1. (a).
Case
2.

Year.	Area sown with particular crop	RABI.						
		Chahi				Barani		
		Matured		Khara- ba	Rent payable	Matured		Khara- ba	Rent payable
	*Ks Ms	*Ks Ms	*Ks Ms		*Ks. Ms	*Ks Ms		
Wheat—								
1921 ..	43 5	{ 24 4 3 2	. 0 10	Owned. Rs 3/- per kanal.	4 3	11 6	Owned.	
1922 ..	26 14	{ 21 10 2 4	. ..	Owned. Rs 3/- per kanal	3 0	..	Owned	
1923 ..	23 5	{ 18 4 1 14	. ..	Owned Rs. 3/- per kanal.	3 7	..	„	
1924 ..	35 0	{ 29 8 1 14	0 11 ..	Owned Rs. 3/- per kanal	3 7		„	
1925 ..	25 19	17 17	.	Owned	8 2	..	„	
Average for 5 years.	30 17	23 19	0 5		4 8	2 5		
Wheat and Gram—								
1921 ..	17 10	..	..	..	17 10	..	Owned
1922 ..	..	..	..	..	..	..	..
1923 ..	16 17	..	..	..	16 17	..	Owned.
1924 ..	14 14	..	..	.	14 14	..	„
1925 ..	29 13	..	..	..	22 13	7 0	„
Average for 5 years	15 15	.	.	..	14 7	1 4	
Gram only in 1922.	5 2	..	.	..	{ 3 0 2 2	. .	Owned. Re. 1/- per kanal.
Senji metha—								
1921 ..	12 8	12 8	..	Owned	..	..
1922 ..	7 1	7 1	..	„	..	..
1923 ..	12 16	12 16	..	„	..	..
1924 ..	6 0	6 0	..	„	..	..
1925 ..	11 17	11 17	..	„	..	..
Average for 5 years.	10 0	10 0	.					

(Continued).

(Concluded)

XV.
1. (a).
Case
2.

Year.	Area sown with particular crop.	RABI					
		Chakr.			Barana.		
		Matured.	Khara- ba	Rent payable.	Matured	Khara- ba.	Rent payable.
	<i>Ks. Ms</i>	<i>Ks. Ms.</i>	<i>Ks Ms.</i>		<i>Ks. Ms</i>	<i>Ks Ms.</i>	
<i>Melons and Vegetables—</i>							
1921	1 0	1 0	.	Owned.		..	.
1922	4 12	4 12	..	..	.	..	..
1923	0 7	0 7		..	.	..	..
1924 ..	0 2	0 2	..	..	.	..	..
1925 .	0 4	0 4	.	..	.	..	..
<i>Average for 5 years.</i>	<i>1 5</i>	<i>1 5</i>			.	..	
<i>Tobacco—</i>							
1921 .	..	..	.		.	..	..
1922 ..	0 17	0 17		Owned	..	..	..
1923	..	..			..	..	..
1924 .	0 16	0 16	..	Owned	..	..	..
1925 .	.	..	..	.	..	..	..
<i>Average for 5 years</i>	<i>0 7</i>	<i>0 7</i>			..	..
<i>Sarson—</i>							
1921 ..	..	..	..	.	..	..	..
1922 ..	.	..	..	.	..	..	..
1923 ..	0 12	0 12	..	Owned	..	..	..
1924 ..	.	..	..	.	.	..	..
1925 ..	0 4	0 4	.	Owned.	..	..	..
<i>Average for 5 years</i>	<i>0 3</i>	<i>0 3</i>	..		..	..

xv. (ii). The working members in the family are a man aged 60, and 1. (a). 3 females aged 50, 45 and 40 years respectively.

Case
2.

(iii). There were no partners in cultivation.

(iv). Details of payments in cash or kind, service rendered, hours and days of work, are now given :—

TABLE LXVI.—*Statement giving Details of the Labour employed by K. B. on his Holding.*

Crop.	Persons employed.	Time taken	Service rendered.	Payment made.	REMARKS.
Chars fodder. (1 k 3 ms.)	Lohar and Tarkhan.	Hrs.Mts.	Customary duties.	4 bundles of the harvest.	Valued at 10 annas.
Maize (10 ks 1 m.)	Lohar and Tarkhan.	..	Customary duties.	1 $\frac{1}{5}$ maunds of grain plus 2 bundles of the harvest.	Valued at— Rs. a. p. Grain 4 0 0 Bundles— Grain 1 10 8 Fodder 0 6 0 Total 6 0 8
Kamad (Sugarcane). (2 ks. 14 ms.)	Labourer.	18 0	Hoeing.	Food for 2 days three times a day.	Food valued at 6 annas. The man employed was a relative and hoed $1\frac{1}{2}$ kanals in one day of 10 hours.
	Lohar and Tarkhan.	..	Customary duties.	4 seers of gur plus 8 seers of juice.	Valued at— Rs. a. p. Gur 0 12 0 Juice 0 8 0 Total 1 4 0
	Labourer.	100 0	Cutting and cleaning canes, boiling juice; also miscellaneous work.	Food for 10 days twice a day, plus $1\frac{1}{2}$ seers of juice for drinking each day.	Value of payments made— Rs. a. p. Food 1 14 0 Juice 0 15 0 Total 2 13 0 The labourer needed the help of the cultivator in some court case and worked cheaply for him.
Cotton. (2 ks. 8 ms.)	Labourer.	36 0	Weeding, hoeing; also miscellaneous work.	Food for 4 days three times a day.	He is the same man as above.
	Lohar and Tarkhan.	..	Customary duties.	4 seers of cotton	Valued at Rs. 1/7/0

(Continued.)

(Concluded.)

Crop	Persons employed.	Time taken	Service rendered.	Payment made	REMARKS.
Wheat (25 ks 19 ms.) Wheat and Gram. (29 ks. 13 ms.)	Labouret	Hrs Mts 160 0	Weeding.	Food for 20 days, twice a day.	He is the same labourer as for cotton. Food valued at Rs. 3/12/0. One man can weed 2 to 3½ kanals in a day of 8 hours. Rs a.p.
Total (55 ks. 12 ms.)	Lohan and Tarkhan	.	Customary duties.	32 seers of wheat plus 4 bundles of the harvest	Valued at— Grain .. 4 0 0 Bundles .. 5 1 8 Total .. 9 1 8
Senji metha fodder (11 ks. 17 ms.)	Lohan and Tarkhan	..	Customary duties.	2 bundles of the crop	Valued at 8 annas.

XV.
1.(a).
Case
2.

(v). Details are now given of the cattle employed, with the duties performed by them throughout the year.

TABLE LXVII. A.—Statement giving Details of Work performed by Cattle in connection with Cultivation on K. B.'s Holding.

Crop.	No. of cattle employed.	Time taken.	Work performed.	REMARKS.
Chari fodder (27 ks. 6 ms.) (Barani 26 ks.; Chahi, 1 k. 3 ms.)	3 oxen; 2 at work, 1 at rest.	Hrs. Mts. 36 4	Ploughed twice, including sowing time.	The cattle ploughed 7 kanals in 4 hours 40 minutes, excluding stoppages.
	Do.	3 40	Used sohaga once.	The yoke covered 10 kanals 3 marlas in 1 hour 22 minutes, excluding stoppages.
	Do.	2 2	Watered once the chahi area in the Dhaha.	The cattle irrigated 31 marlas in 2½ hours in the Dhaha.
	Do.	6 0	Carrying home the crop (6 cart-loads).	Each trip of the cart to the field and back, excluding stoppages, took one hour.

(Continued.)

(Continued.)

XV.
1. (a).
Case
2.

Crop.	No. of cattle employed.	Time taken.		Work performed.	REMARKS.
		Hrs	Mts		
Maize. (10 ks 1 m.)	3 oxen ; 2 at work, 1 at rest.	38	30	Ploughed 5 times, including sowing time.	Working time calculated as for <i>chari</i> above.
	Do.	4	4	Used <i>sohaga</i> 3 times.	Do.
	Do.	57	26	Watered 4 times.	The cattle irrigated 3½ <i>kanals</i> in 5 hours in the <i>Bet</i> .
	Do.	6	0	Carting the harvest to the enclosure (6 cart-loads).	Each trip of the cart took one hour.
	Do.	10	0	Threshing and crushing maize cobs	Working time approximate.
<i>Kamad</i> (Sugarcane). (2 ks. 14 ms.)	3 oxen ; 2 at work, 1 at rest.	10	48	Ploughed six times, including sowing time	Time calculated as for <i>chari</i> above.
	Do.	7	15	Used <i>sohaga</i> 20 times.	Do
	Do.	27	0	Watered 7 times	Irrigation was by bucket wheel in the <i>Bet</i> .
	Do.	10	0	Carting canes to the pressing yard (10 cart-loads)	Each trip took one hour
	Do	57	0	Pressing.	One jar was filled in 1½ hours The yield of juice was 38 jars per day.
Cotton. (2 ks. 8 ms.)	3 oxen ; 2 at work, 1 at rest.	6	24	Ploughed four times	Time calculated as for <i>chari</i> above
	Do.	1	34	Used <i>sohaga</i> twice	Do
	Do.	6	52	Watered twice.	Irrigation was by bucket wheel in the <i>Bet</i>
Wheat. (25 ks. 19 ms.) (<i>Barani</i> , 8 ks 2 ms.; <i>Chahi</i> , 17 ks. 17 ms.)	3 oxen ; 2 at work, 1 at rest.	83	37	Ploughed <i>chahi</i> area six times	The cattle ploughed 4½ <i>kanals</i> in 3 hours 30 minutes, excluding stoppages
	Do.	44	6	Ploughed <i>barani</i> area seven times.	Wheat requires more careful ploughing and consequently takes more time.
	Do.	24	30	Used <i>sohaga</i> seven times on the whole area.	Do
	Do.	76	30	Watered <i>chahi</i> area three times.	Time calculated as for <i>chari</i> above
	Do.	126	0	Threshing (150 sheaves).	Irrigation was by bucket wheel in the <i>Bet</i> . 50 sheaves were threshed in 42 hours.

(Continued.)

(Concluded)

Crop.	No of cattle employed.	Time taken.		Work performed.	REMARKS.	XV. 1. (a) Case 2.
		Hrs.	Mts			
Wheat and Gram. (29 ks. 13 ms.)	3 oxen, 2 at work, 1 at rest.	161	26	Ploughed seven times.	Time calculated as for <i>chari</i> above.	
	Do.	24	0	Used <i>sohaga</i> six times.	Do.	
	Do.	5	50	Carrying part of the harvest to threshing floor (10 cart-loads).	One trip excluding stoppages, took 35 minutes. The remaining harvest was brought to the floor on the heads	
	Do	84	0	Threshing (100 sheaves).	50 sheaves were threshed in 42 hours.	
	Do.	13	0	Carting home wheat, and wheat and gram, (13 cart-loads)	Each trip took one hour.	
<i>Senji metha</i> fodder. (11 ks 17 ms.)	3 oxen; 2 at work, 1 at rest.	84	39	Watered five times	Irrigation was by bucket wheel in the <i>Bet</i> No ploughing was done; <i>senji metha</i> followed maize here.	
	Do.	6	0	Carting home the produce (6 cart-loads).	Each trip took one hour.	
<i>Sarson.</i> (0 ks. 4 ms.)	3 oxen; 2 at work, 1 at rest.	1	47	Watered five times	Irrigation was by bucket wheel in the <i>Bet</i> .	
Carrots. (0 ks. 4 ms.)	3 oxen; 2 at work, 1 at rest.	0	32	Ploughed four times		
	Do.	1	47	Watered five times.	Irrigation was by bucket wheel in the <i>Bet</i> .	
	Do.	50	0	Carting of manure to the field for the next maize crop (50 cart-loads).	Each trip took one hour.	
TOTAL WORK OF ONE YOKE		.. 1,078 23		..	..

XV.
1. (a).
Case
2.

K. B. employed three cattle throughout the year; while two were at work, one was always at rest, in other words 1,078 hours 23 minutes gives the working time of one yoke of cattle. Working time by each animal is therefore, $\frac{2}{3}$ rds of this figure, viz, 718 hours 55 minutes.

TABLE LXVII. B.—*Statement giving Details of Work performed Independent of Cultivation by cattle owned by K. B.*

Cattle employed.	Time taken	Work performed	REMARKS.
	Hrs. Mts		
3 oxen; 2 at work, 1 at rest.	3 20	Grinding 2 mds. of wheat.	A yoke of oxen ground 16 seers of wheat in 40 minutes, excluding stoppages. Similarly they ground 1 md. of maize in 2 hours 20 minutes, excluding stoppages.
Do.	7 0	Grinding 3 mds of maize.	
Do.	2 0	Fetching clay for repairs, etc. (2 cart-loads).	
Do.	3 0	Fetching necessaries once for the household from Phillour	
Total	15 20	..	..

This work amounting to 15 hours 20 minutes was done by 2 oxen while the third rested. If divided over the three it amounts to 10 hours 13 minutes per head. An estimate of the capital cost of the cattle per year is as follows:—

TABLE LXVIII.—*Statement showing the Capital Cost per Year of Cattle owned by K. B.*

Cattle.	Purchase price.	Probable working life when purchased.	Capital cost per year.	REMARKS.
	Rs.	Years.	Rs a. p.	
1 ox ..	45	16	2 13 0	Did not work before purchase. Now worked for 12 years.
1 „ ..	65	16	4 1 0	Now worked for 13 years.
1 „ ..	70	16	4 6 0	Not worked before purchase; recently put to work.
Total capital cost of the cattle per year.			11 4 0	..
Average capital cost per head ..			3 12 0	..

An estimate of the value of fodder K. B used for the cattle during the year is given below. Fodder was neither purchased nor sold during the year from the holding, it was just sufficient for K. B's needs. The cattle fed during the year were 3 oxen, 1 cow, 1 cow-buffalo, and 2 young cow-buffaloes aged $1\frac{1}{2}$ and $2\frac{1}{2}$ years, respectively. Together they consumed—

		Rs.	a.	p.
i.	27 <i>kanals</i> 6 <i>marlas</i> of <i>chari</i> fodder, valued at			
	Rs. 4/- per <i>kanal</i>	109	3	2
ii	$3\frac{1}{2}$ heavy cart-loads of maize fodder, valued at			
	Rs. 6/- a load	21	0	0
iii	100 <i>tangars</i> of wheat straw, valued at one			
	rupee per <i>tangur</i>	100	0	0
iv	11 <i>kanals</i> 17 <i>marlas</i> of <i>sengr-metha</i> fodder (a			
	good crop), valued at Rs. 7/- per <i>kanal</i> ..	82	15	2
	<i>Total</i> ..	313	2	4

A cow eats less fodder than an ox, while a cow-buffalo eats more; thus for consumption purposes the cow and the cow-buffalo may be taken as roughly equivalent to 2 oxen. Two young cow-buffaloes eat about as much as one ox. Thus in terms of head of oxen 6 were fed throughout the year and the share of the plough oxen is thus half the total given above, *viz*, Rs. 156/9/2.

In addition to the fodder consumed by the plough cattle, the following items given to them during the year have to be included :—

		Rs.	a.	p.
i.	2 maunds of gram, valued at .. .	7	8	0
ii	6 maunds of wheat and gram, valued at the			
	price at which K. B. sold at harvest time..	25	0	0
iii.	24 seers of <i>gur</i> , valued at .. .	4	8	0
	<i>Total</i> ..	37	0	0

No medicines were given to the cattle during the year. Expenditure on salt amounted to Re. 1/8/0. The total cost of fodder, grain and salt given to the plough cattle during the year was Rs. 195/1/2, and if the capital cost per year is also included, it comes to Rs. 206/5/2 or Rs. 68/12/4 per animal. A yoke was shown to have been employed in work connected with cultivation for 1,078 hours 23 minutes and in work independent of cultivation for 15 hours 20 minutes, or a total of 1,093 hours 43 minutes. But as two oxen worked while one rested, the number of working hours per head is only $\frac{2}{3}$ of

XV. this figure or 729 hours 9 minutes. Thus the cost per ox per hour of work
 1. (a). done during the year is Re. 0/1/7. The work done by the cattle independent
 Case of cultivation amounted to $15\frac{1}{2}$ hours of one yoke or $10\frac{13}{60}$ hours
 2. of one ox, and its cost works out at Re. 1/0/2. Thus the cost of one ox for work done in connection with cultivation is Rs. 67/12/2 and for 3 oxen Rs. 203/4/6.

(vi). K. B. did not hire any cattle throughout the year.

(vii). The manure used consisted of all kinds of sweepings and dung. K. B. devotes little attention to weeding; the deficiency he tries to make good by giving more ploughings preparatory to sowing, and more manure, than is customary with his neighbours. The manure used was all home produced, and he applied during the year 50 cart-loads for growing maize only on 10 *kanals* 1 *marla* of land, i.e., about 5 cart-loads per *kanal*. The manure was stacked in heaps over the land for about a month before preparatory steps for sowing the crop were taken. K. B. takes 2 to 3 crops in quick succession from the area manured for growing maize. The *chahi* area on which he grows wheat, following wheat in the previous *rabi*, is manured once in two years. If cotton is grown on such land after wheat, *senji* is put in as a catch crop. If *chari* fodder is sown immediately after the wheat harvest is removed, no manure is used for growing wheat in the next *rabi*.

(viii). Full details of fodder, etc., used have been given in (v) above.

(ix). The amount of grain given to the cattle during the year has been considered in (v) above; it was all home produced.

Details of the produce, other than fodder, which K. B. grew during the year are given below—

	Rs. a. p.
24 maunds of maize, valued at 12 seers a rupee .	80 0 0
9 maunds 20 seers of <i>gur</i> , valued at ..	71 5 0
2 maunds 16 seers of cotton estimated at the rate at which he actually sold a part of this, viz., $2\frac{4}{5}$ seers a rupee	34 4 7
24 maunds of wheat and gram mixed, valued at	100 0 0
40 maunds of wheat, valued at 8 seers a rupee	200 0 0
<i>Total</i> ..	<hr/> 485 9 7 <hr/>

Besides 4 *marlas* of *sarson* crop was consumed as *sag* valued at Re. 1/6/5, and 4 *marlas* of carrots was also consumed valued at Rs. 4/-. Thus the total amount earned by him during the year was Rs. 491/-.

(x). The implements used by the cultivator with details of values, etc., are given on the next page; their cost averages Rs. 37/8/10 per year.

TABLE LXIX.—*Giving details of Agricultural Implements used by K. B.*

Implements	Time it lasts.	No. in his possession	Use	Cost per implement.	Average cost per year.	REMARKS.	XV. 1. (a). Case 2.
1. <i>Hal</i> * (Plough)	Years. 4	1	Ploughing ..	Rs a. p. 1 0 0	Rs. a. p. 0 4 0		
2. <i>Phala</i> (Ploughshare).	1½	1	„ ..	0 8 0	0 5 4		
3. <i>Pathi</i> (Holder of the share).	½	1	„ ..	0 4 0	0 8 0		
4. <i>Penjahi</i> (Wooden yoke)	4	1	Yoking the cattle for ploughing	0 12 0	0 3 0		
5. <i>Pinjahi</i> (Wooden yoke)	4	1	Yoking the cattle for irrigation.	0 12 0	0 3 0		
6. <i>Schaga</i> (Clod-crusher)	4	1	Levelling ..	2 0 0	0 8 0		
7. <i>Kahi</i> (Spade).	10	1	Digging	1 8 0	0 2 5		
8. <i>Khuth</i> or <i>gadala</i> (Spade).	10	1	„ ..	1 0 0	0 1 7		
9. <i>Kulhari</i> (Small axe)	10	1	Chopping wood .	0 6 0	0 0 7		
10. <i>Ramba</i> or <i>khurpa</i> (Trowel)	½	4	Hoeing and cutting grass.	0 4 0	2 0 0		
11. <i>Daranti</i> (Sickle)	4	4	Cutting grass and harvesting.	0 4 0	0 4 0		
12. <i>Dai</i> (Sickle without teeth).	10	1	Cutting fodder .	0 4 0	0 0 5		
13. <i>Bangri</i> (Hoe)	3	2	Hoeing ..	0 4 0	0 2 8		
14. <i>Tanghi</i> (4 pronged fork).	4	2	Collecting <i>bhusa</i> at the threshing floor.	1 0 0	0 8 0	Purchased.	
15. <i>Sangi</i> (2-pronged fork).	2	1	Scattering harvest on the threshing floor.	0 3 0	0 1 6		
16. <i>Phalla</i> (Wooden framework)	3	1	Treading harvest..	0 4 0	0 1 4		
17. <i>Tangar</i> (Rope net).	6	4	Carrying <i>bhusa</i> ..	3 8 0	2 5 4	Home made	
18. Ropes ..	1½	3	For yoking and tying.	1 0 0	2 0 0	Do.	
19. <i>Chhukhi</i> (Muzzle).	3	3	Muzzling cattle ..	0 2 0	0 2 0	Made at home from <i>san</i>	
20. Basket† .	½	2	Carrying <i>bhusa</i> and manure.	0 3 0	0 12 0		
21. <i>Karah</i> (Earth board)	10	1	Levelling ..	1 12 0	0 2 10		
22. <i>Charsa</i> (leather bag).	½ to 1	1	Drawing water ..	16 0 0	16 0 0	Purchased Not used much.	
23. <i>Kundal</i> (Iron handle).	12	1	Lifting <i>charsa</i> ..	3 0 0	0 4 0		
24. <i>Lawn</i> (Rope)	½	1	Drawing up <i>charsa</i>	5 0 0	10 0 0	Made at home from <i>san</i> .	
25. <i>Bhoni</i> (Pulley)	10	1	„ ..	4 0 0	0 6 5	Purchased.	
26. <i>Dhura</i> (Iron axle).	10	1	Working pulley ..	1 8 0	0 2 5	Do.	
Average cost per year				..	37 8 10		

* The cultivator supplies wood to the carpenter, and iron and coal to the blacksmith, who make the implements as part of their contract For *hal* or *phala* two seers of grain is, however, given to the carpenter.

† Mulberry twigs were supplied by the cultivator from his own tree; the *jhiwar* prepared the baskets, keeping half the number made as remuneration for his own labour.

XV.
1.(a).
Case
2.

K. B. has also his own bucket wheel set up on his well in the *Bet* land. It was originally purchased for Rs. 210/-, and he expects it to last for 20 years with an expenditure for maintenance during that period of Rs. 100/-. The anticipated cost over 20 years is thus Rs. 310/-, which gives the annual cost of the wheel at Rs. 15/8/0. Oil for lubricating the wheel costs about Rs. 3/- a year, which gives Rs 18/8/0 as the total cost of wheel per year.

(xi). No implements were hired during the year.

(xii) The cost of pressing canes and making *gur* is as follows :—

	Rs.	a.	p
Pressing the canes into 19 pairs of jars at the			
current rate	3	9	0
Oil for lubricating the machine	0	5	0
Soda for purification of the juice	0	5	0
<i>Total</i>	<u>4</u>	<u>3</u>	<u>0</u>

(xiii). Salt for the cattle has already been considered in (v) above. During the year *rakhas* (watchers) were paid as follows :—

	Rs.	a.	p.
Maize, 4 seers valued at	0	5	4
Wheat, 4 „ „ „	0	8	0
<i>Total</i>	<u>0</u>	<u>13</u>	<u>4</u>

(xiv). K. B. purchased a cart for Rs. 150/-. It is expected to last for 20 years with the renewal of the wheels which will cost Rs. 50/-. The maintenance expenses during that period are estimated at Rs. 8/- and the value of the cart as firewood at the end of 20 years at Rs. 8/-. The cost of the cart per year thus works out at Rs. 10/-. The owner did not earn anything, in cash or in kind, by plying the cart for hire, but the uses to which the cart was put during the year were as follows :—

Work performed in connection with cultivation—

	Hrs.	Mts.
Carrying maize harvest to the enclosure from field ..	6	0
„ <i>chari</i> fodder home.. .. .	6	0
„ canes to the pressing yard	10	0
„ wheat harvest to the threshing floor ..	5	50
Carting wheat and straw (13 cart-loads) ..	13	0
„ manure to the maize plot (50 cart-loads) ..	50	0
Carrying <i>senj-metha</i> fodder crop	6	0
<i>Total in connection with cultivation</i>	<u>96</u>	<u>50</u>

Work performed independent of cultivation—	Hrs.	Mts.	XV. 1. (a). Case 2.
Fetching clay for repairs	2	0	
„ some necessaries from Phillour (one trip)	3	0	
<i>Total independent of cultivation</i>		<u>5</u>	<u>0</u>
<i>Grand Total</i> ..	<u>101</u>	<u>50</u>	

Taking the work done during the year the cost of the cart works out at Re 0/1/7 per hour. The value of the work done in connection with cultivation is Rs. 9/8/1, and of work done independent of cultivation Re. 0/7/10.

(xv). All seed used was home produced; values at the sowing time are the same as those given in Case No. 1.

(xvi). There were no expenses of sowing other than those given in (iv) above, where the dues of a *lohar* and a *tarkhan* in this connection were described.

(xvii). Expenses in connection with cultivation after sowing, *e g.*, weeding, are given in (iv) above.

(xviii). Similarly harvesting expenses have been detailed in the same paragraph.

(xix). The question of deductions from the common heap does not arise, as the cultivator was the owner of the area he cultivated.

(xx). There were no expenses in connection with threshing and winnowing, which he did himself. He keeps no *chamar*.

(xxi). Two years ago K. B. sent for 18 *karahs* for the purpose of levelling a plot. They were his own friends and neighbours and came on *awat* (an invitation for help in some agricultural operation). He paid them nothing in cash, but fed them well for the work, which was done in one day; their oxen also were given fodder for the day. He thus fed 18 men and 36 oxen in one day. The food for the men cost some Rs. 10/-, and K. B., speaking from memory, said, that he had fed to the cattle 110 *pulas* (bundles) of *chari* fodder, selling at the rate of 20 bundles per rupee at that time; the cost of feeding the animals was, therefore, Rs. 5/8/0.

On hedging, the making of boundaries, etc., nothing has been spent in the last five years. Wherever hedging was required, K. B. cut the branches from his own trees and did the work himself.

Case No. 3.

XV. Cultivator R.A. owns 52 *kanals* 19 *marlas* made up of 45 *kanals* 12 *marlas* cultivated, and 7 *kanals* 7 *marlas* uncultivated. He also controls the cultivation of a considerable amount of land which belongs to some of his near relatives and for which he pays nothing. The relatives are in service and are not residents of the village.

TABLE LXX. A.—Statement showing Areas Sown with Kharif Crops in the last Five Years by R. A.

Year	Area sown with particular crop.		KHARIF							
			Chahi.				Barani			
			Matured		Kharaba		Matured		Kharaba	
	*Ks	Ms.	*Ks.	Ms	*Ks	Ms	*Ks	Ms	*Ks	Ms
<i>Chara fodder</i>										
1920 ..	6	11	.		..		2	7	4	4
1921 ..	7	10	2	18	.		4	12	..	
1922 ..	16	11	..		.		16	11	.	
1923 ..	13	4	..		..		13	4	.	
1924 ..	8	11	1	17	..		6	14	..	
<i>Average for 5 years.</i>	10	9	0	19	.		8	14	0	17
<i>Maize.</i>										
1920 ..	10	16	10	11	0	5	..		..
1921 ..	14	5	12	17	1	8	..		..
1922 ..	14	14	14	14	..		..		..
1923 ..	16	2	9	19	6	3	..		..
1924 ..	13	5	12	5	1	0	..		..
<i>Average for 5 years.</i>	13	16	12	1	1	15	..		..

(Continued.)

*Ks.=kanals; Ms.=marlas: 20 marlas=1 kanal; 10³/₅ kanals=1 acre.

(Concluded.)

Year.	Area sown with particular crop.		Kharif.								
			Chahr.				Barani.				
			Matured.		Kharaba.		Matured.		Kharaba.		
		Ks.	Ms.	Ks.	Ms.	Ks.	Ms.	Ks.	Ms.	Ks.	Ms.
<i>Kamad</i>											
1920	..	7	6	7	6	..		..		..
1921	..	4	17	2	6	2	11	..		..
1922	..	6	9	6	9	..		..		..
1923	.	6	10	5	10	1	0	..		..
1924	.	7	6	7	6	..		..		..
<i>Average for 5 years.</i>		6	10	5	15	0	14	..		..
<i>Cotton.</i>											
1920	.	2	15	2	15	..		.		..
1921	
1922	.	1	12	1	12	..		..		..
1923	
1924		1	15	1	15	..		..		..
<i>Average for 5 years.</i>		1	4	1	4	..		..		..
<i>San.</i>											
1920	..	0	4	..		..		0	4	..	
1921	
1922	.	1	0	1	0	..		..		..
1923	
1924	
<i>Average for 5 years.</i>		0	5	0	4	..		0	1	..	
<i>Mash only in 1922</i>		..	1	0	.	..		1	0	..	
<i>Jowar.</i>											
1920	
1921	
1922	..	0	4		0	4	..	
1923	
1924	..	0	5	0	5	
<i>Average for 5 years.</i>		0	2	0	1	..		0	1		

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1. (a).
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TABLE LXX. B.—Statement showing Areas Sown with Rabi Crops in the last Five Years by R. A.

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1. (a).
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Year.	Area sown with particular crop	RABI.							
		Chahr				Barani			
		Matured.		Kharaba		Matured		Kharaba	
	*Ks Ms	*Ks Ms	*Ks Ms	*Ks Ms	*Ks Ms	*Ks Ms	*Ks Ms	*Ks Ms	*Ks Ms
<i>Wheat</i>									
1921	31 10	11 10	2 6	1 0	16 14				
1922	21 11	8 17	.	12 14	.				
1923	27 14	13 7	..	14 7					
1924	30 6	12 12	.	17 14					
1925	17 11	4 17	..	5 17	6 17				
<i>Average for 5 years.</i>	25 14	10 5	0 9	10 6	4 14				
<i>Wheat and Gram</i>									
1921	.	.	.	..	
1922	17 16	.	..	14 4	3 12				
1923	1 11			1 11					
1924	2 18			2 18					
1925	14 13	.	..	11 15	2 18				
<i>Average for 5 years.</i>	7 8	.		6 2	1 6				
<i>Senj metha</i>									
1921	8 6	6 7	1 10		.				
1922	7 9	5 18	1 11		..				
1923	10 16	10 16	.		..				
1924	7 6	7 6	.		..				
1925	8 14	8 14	..	..	..	
<i>Average for 5 years</i>	8 10	7 16	0 14	..	.				
<i>Barley only in 1924</i>	2 17	2 0	0 17	.	..				
<i>Sarson only in 1925</i>	1 5	1 5	..	..	..	
<i>Melons only in 1925</i>	0 15	0 15	..	..			

*Ks.=kanals; Ms.=marlas: 20 marlas=1 kanal; 10³/₅ kanals=1 acre.

(ii). The working members in the family consist of two males, aged 40 and 35 years, respectively, and one female aged 58 years. XV.
1. (a)
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(iii). There were no partners in cultivation.

(iv). Details of payments in cash or kind, service rendered, hours and days of work, are now given.

TABLE LXXI.—*Statement giving Details of the Labour employed by R. A. on his Holding.*

Crop.	Persons employed	Time taken	Service rendered	Payment made.	REMARKS.
Maize (13 ks. 5 ms)	Labourer	Hrs Mts 20 0	Weeding.	Re 1/8/0 in cash	The labourer was assisted by two members of the family.
	Lohar and Tarkhan		Customary duties.	2 bundles of the harvest	Rs. a. p Valued at— Grain 1 10 8 Fodder 0 6 0 Total 2 0 8
	..	..	.	1 maund of grain	Valued at—3 5 4
	Chamar.	10 0	Weeding	1 ³ / ₈ maunds of grain plus food for 9 days.	Valued at— Grain 5 5 4 Food 1 11 0 Total 7 0 4
		80 0 (10 hrs a day—9 days).	Watering; also miscellaneous work		
Kam id (Sugarcane) (7 ks 6 ms)	Labourer.	40 0	Weeding	Food plus 6 annas a day for 4 days.	Value of payments made— Rs. a. p. Cash 1 4 0 Food 0 12 0 Total 2 0 0
	Labourer.	20 0	Watering.	Food plus 7 annas a day for 2 days	Cash 0 14 0 Food 0 6 0 Total 1 4 0
	Chamar	96 0 (12 hrs a day—8 days)	Cutting and cleaning canes, boiling juice, also miscellaneous work.	24 seers gur, food for 8 days and 1 ¹ / ₂ seers juice for drinking each day, wash of pan, and 4 canes each day.	Value of payments made— Gur 4 8 0 Food 1 8 0 Juice 0 12 0 Wash 1 0 0 Canes 0 2 0 Total 7 14 6
	Lohar and Tarkhan	..	Customary duties.	6 ³ / ₈ seers of gur plus 8 seers juice.	Valued at— Gur 1 3 2 Juice 0 9 0 Total 1 11 2

(Continued.)

(Concluded.)

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1. (a).
Case
3.

Crop.	Person employed.	Time taken.	Service rendered.	Payment made.	REMARKS.
<i>Chari</i> .. (8 ks 11 ms.)	<i>Lohar and Tarkhan</i>	Hrs. Mts. ..	Customary duties.	2 bundles of the harvest.	Rs. a p Valued at— 0 5 0
	<i>Chamar.</i>	.	Do	1 bundle of the harvest.	Valued at— 0 2 6 His duties are to mend irrigation bags, shoes and other leather articles; to assist in threshing, winnowing, and to supply occasional help for weeding and watering
<i>Cotton.</i> (1 ks. 15 ms.)	<i>Lohar and Tarkhan.</i>	..	Customary duties.	Allowed two of the last three pickings	Rs. a p About 4 seers, worth— 1 0 0
	<i>Chamar.</i>	.	Do.	Allowed last picking.	About 2 seers, worth— 0 8 0
<i>Wheat</i> (17 ks. 11 ms.)	Labourer	16 0	Weeding	8 seers of wheat plus food twice a day for two days.	Rs. a p. Valued at— Wheat 1 0 0 Food 0 6 0 <i>Total</i> 1 6 0
<i>Wheat and Gram.</i> (14 ks 13 ms.) (Total 32 ks. 4 ms.)	<i>Chamar.</i>	98 0	Reaping, collecting, carting, etc	7 bundles of the harvest plus 7 <i>kalauas</i> ($\frac{3}{4}$ ths of a bundle approximately.)	Valued at— Grain 5 14 6 Fodder 3 0 0 <i>Total</i> 8 14 6
	Do.	..	Customary duties.	3 $\frac{1}{2}$ maunds of grain plus 1 <i>tangar</i> of straw.	Valued at— Grain 14 8 8 Straw 1 0 0 <i>Total</i> 15 8 8
	<i>Lohar and Tarkhan.</i>	..	Do	1 $\frac{1}{2}$ maunds of grain plus 2 bundles of harvest.	Valued at— Grain 5 7 0 Bundles 2 7 6 <i>Total</i> 7 14 6
<i>Senji metha fodder.</i> (8 ks. 14 ms.)	Labourer.	10 0	Sowing by hoeing.	Food twice a day for one day plus 8 annas.	Valued at— Rs. a p Cash 0 8 0 Food 0 3 0 <i>Total</i> 0 11 0
	<i>Lohar and Tarkhan.</i>	..	Customary duties.	2 bundles of fodder.	Valued at— 0 8 0
	<i>Chamar.</i>	..	Do.	1 bundle of fodder.	Valued at— 0 4 0

(v). Details are now given of the cattle employed with the duties performed by them throughout the year.

TABLE LXXII. A.—Statement giving Details of Work performed by Cattle in connection with Cultivation on R. A's Holding

XV.
1. (a).
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Crop	No. of cattle employed.	Time taken	Work performed	REMARKS
<i>Chars</i> (8 ks 11 ms.) (<i>Chahn</i> , 1 k. 17 ms, <i>Baran</i> , 6 ks 1½ ms)	3 oxen ; 2 at work, one at rest.	His Mts 13 41	Ploughed twice both areas, including sowing time	The cattle ploughed 5 ks in 3 hrs. 53 mts, excluding stoppages.
	Do.	1 15	Used <i>sohaga</i> once.	The cattle covered 10 ks in 1 hr. 25 mts.
	Do	7 48	Watered <i>chahn</i> area twice	The cattle ploughed 3 ks 2 ms in 6 hrs, excluding stoppages. Irrigation was from the well in the <i>Dhaha</i>
	Do	2 20	Carting home the crop (2 cart-loads)	One trip took 1 hr. 10 mts
<i>Kamad</i> (Sugarcane). (7 ks. 6 ms.)	3 oxen ; 2 at work, one at rest.	39 41	Ploughed 7 times, including sowing time	Irrigation was from the well in the <i>Dhaha</i> . One jar was filled in 1½ hours. The yield of juice was 32 jars. Each trip took 1 hr. 10 mts.
	Do.	4 8	Used <i>sohaga</i> 4 times	
	Do.	141 18	Watered 10 times.	
	Do	48 0	Pressing	
Cotton (1 ks. 15 ms)	3 oxen ; 2 at work, one at rest.	2 43	Ploughed twice, including sowing time	Irrigation was from the well in the <i>Dhaha</i> . The trip took 1 hr. 10 mts.
	Do	0 30	Used <i>sohaga</i> twice	
	Do.	13 33	Watered 4 times, including once preparatory to sowing.	
	Do.	1 10	Carting home dry plants (1 cart-load)	
Maize (13 ks. 5 ms.)	3 oxen ; 2 at work, one at rest.	30 52	Ploughed 3 times, including sowing time.	Irrigation was from the well in the <i>Dhaha</i> . Each trip took 1 hr. 10 mts Threshing was done by beating the cobs with heavy sticks.
	Do.	1 52	Used <i>sohaga</i> once.	
	Do	76 56	Watered 3 times.	
	Do.	5 50	Carting harvest to threshing floor (5 cart-loads).	

(Continued.)

(Concluded).

XV. 1. (a). Case 3.	Crop.	No. of cattle employed.	Time taken.		Work performed.	REMARKS
			Hrs.	Mts.		
	Wheat (<i>Chahr</i>) (4 ks. 17 ms.)	3 oxen; 2 at work, one at rest.	15	4	Ploughed 4 times, in- cluding sowing time	No difference was ob- served in the number of ploughings given to wheat, the esti- mate of time devoted being the same as for other crops.
		Do	1	52	Used <i>sohaga</i> 3 times	
		Do.	25	31	Watered 3 times.	Irrigation was from the well in the <i>Dhaha</i> .
		Do	1	10	Carting of harvest to threshing floor (1 cart-load)	The trip took 1 hr. 10 mts.
	(<i>Barani</i>) (12 ks. 14 ms.)	Do	69	3	Ploughed 7 times, in- cluding sowing time	
		Do	7	12	Used <i>sohaga</i> 4 times	
	Wheat and Gram (<i>Barani</i>) (14 ks. 13 ms.)	3 oxen, 2 at work, one at rest.	79	39	Ploughed 7 times, in- cluding sowing time	
		Do	8	18	Used <i>sohaga</i> 4 times	
		Do.	2	20	Carting harvest, in- cluding wheat of <i>barani</i> area, to threshing floor (4 cart-loads).	Each trip took 35 minutes, excluding stoppages.
		Do	126	0	Threshing of wheat, and wheat-gram harvest (150 sheaves)	50 sheaves were threshed in 40 hrs. The wheat was brought from the threshing floor, which was near the village <i>abadi</i> , on the heads of men.
	<i>Senji metha</i> and <i>sarson</i> , grown mixed. (9 ks. 19 ms.)	3 oxen, 2 at work, one at rest.	96	18	Watered 5 times.	Sowing was done by scattering the seed broadcast and hoe- ing. Irrigation was from the well in the <i>Dhaha</i> .
		Do.	4	40	Carting home the produce (4 cart- loads).	Each trip took 1 hr. 10 mts
	Melons (0 ks. 15 ms.)	3 oxen; 2 at work, one at rest.	1	10	Ploughing twice.	
		Do.	0	13	Used <i>sohaga</i> twice.	
		Do.	5	48	Watered 4 times	
		Do	58	2	Carrying manure to the field for the next maize crop (50 cart-loads).	
		Do.	17	30	Carrying manure to the <i>chahi</i> wheat area for the next crop (15 cart- loads).	
TOTAL WORK OF ONE YOKE			920	47	..	..

TABLE LXXII. B.—*Statement giving Details of Work performed Independent of Cultivation by Cattle owned by R. A.*

Cattle employed	Time taken	Work performed	REMARKS
	Hrs. Mts		
3 oxen , 2 at work, one at rest	6 40	Grinding 4 mds. of wheat	A yoke of oxen ground 16 seers of wheat in 40 minutes. Similar-
Do.	7 0	Grinding 3 mds. of maize.	ly they ground one md. of maize in 2 hours 20 minutes, ex- cluding stoppages.
Do.	0 40	Grinding 32 seers of gram <i>danar</i>	A yoke of oxen in 20 minutes, excluding stoppages, ground 16 seers of gram <i>danar</i> (flour roughly ground for cattle)
Do	28 0	Plying cart for hire	Distance travelled about 56 miles.
Do.	4 0	Fetching clay for repair (4 cart-loads)	One hour per trip.
<i>Total</i>	<i>46 20</i>		

This work amounting to 46 hours 20 minutes was done by 2 oxen while the third rested. If divided over the three it amounts to 30 hours 53 minutes per head. An estimate of the capital cost of the cattle per year is as follows:—

TABLE LXXIII.—*Statement showing the Capital Cost per Year of Cattle owned by R. A.*

Cattle.	Purchase price.	Probable working life when purchased.	Capital cost per year.	REMARKS.
	Rs.	Years.	Rs. a. p.	
1 ox .	180	14	12 13 9	Worked 2 years before purchase.
1 ox ..	115	11	10 7 3	Worked 5 years before purchase.
1 ox ..	90	10	9 0 0	Worked 6 years before purchase.
Total capital cost of the cattle per year ..			32 5 0	..
Average capital cost per head			10 12 4	..

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XV. In addition to his three plough oxen R A. also has one cow-buffalo,
 1. (a). and the 4 animals together consumed during the year fodder as follows :—
 Case
 3.

		Rs	a.	p.
i.	60 <i>tangars</i> of wheat straw (home produced), valued at Re. 1/- per <i>tangar</i> ..	60	0	0
ii.	30 <i>tangars</i> of wheat straw (purchased) at Re. 1/- per <i>tangar</i> ..	30	0	0
iii.	9 <i>kanals</i> 19 <i>marlas</i> of <i>sengi</i> and <i>sarson</i> (home produced ; a good crop), valued at Rs. 7/- per <i>kanal</i>	69	10	5
iv.	8 <i>kanals</i> 11 <i>marlas</i> of <i>chari</i> at Rs. 4/- per <i>kanal</i>	34	3	2
v.	3 cart-loads of maize at Rs 4/- per load (light loads)	12	0	0
<i>Total</i> ..		205	13	7

The consumption of fodder by the cow-buffalo may be taken as equal to that of an ox, and hence $\frac{3}{4}$ ths of the cost of fodder may be attributed to the plough cattle, i.e., Rs. 154/6/2.

In addition to the above the plough animals consumed during the year :—

		Rs.	a.	p.
i.	Cotton seed (purchased) ..	4	0	0
ii.	Gram, 32 seers borrowed for cattle and repaid as 1 maund of wheat, valued at ..	5	0	0
iii.	<i>Gur</i> , 16 seers (home produced) ..	3	0	0
iv.	Salt and medicines	4	0	0
<i>Total</i> ..		16	0	0

Adding together the capital cost of the cattle for the year and their consumption of fodder, we get Rs. 202/11/2 as the cost of 3 plough cattle for the year, or Rs. 67/9/1 per head. A yoke was shown to have been employed in work connected with cultivation for 920 hours 47 minutes and in work independent of cultivation for 46 hours 20 minutes, or a total of 967 hours 7 minutes. As only 2 animals worked at a time while the third rested the number of working hours per head is only $\frac{1}{3}$ rd of this figure, i.e., 644 hours 14 minutes. Thus the cost per ox per hour of work done during the

year is Re. 0/1/8. The work done by the cattle independent of cultivation amounted to 46 hours 20 minutes of one yoke, or 30 hours 53 minutes of 1 ox, and its cost works out at Rs 3/3/6 per animal. Thus the cost of an ox for work done in connection with cultivation is Rs. 64/5/6, or for the 3 cattle Rs. 193/0/6.

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1. (a).
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(vi) No cattle were hired during the year.

(vii) R. A. used during the year 65 cart-loads of manure—dung and sweepings of all kinds. 50 cart-loads were home produced and 15 cart-loads were purchased for Rs 12/-. Like other cultivators he carted the manure to the fields in the beginning of June. It was allowed to stay in heaps for more than a month in the case of maize and for about 5 months in the case of wheat, and the scattering was done just before sowing the crops. He grew three crops on the manured area in quick succession. The area manured for wheat was used for *chari* fodder in the *kharif* and wheat again in the next *rabi* without further manuring; that manured for maize was put under *senji-metha* fodder in *rabi* and this in turn was followed by sugarcane.

(viii). Full details of fodder, etc., used for the cattle have been given in (v) above.

(ix). Grain, etc., fed to the cattle during the year with details has been given in (v) above.

Details of the produce, other than fodder, which he grew during the year, with values are given below:—

		Rs. a. p.
15 <i>marlas</i> of melons at Rs. 10/- per <i>kanal</i>	..	7 8 0
18 maunds of maize at 12 seers a rupee	..	60 0 0
4 seers of <i>jowar</i> , valued at ..	..	0 6 0
12 seers of cotton, valued at ..	..	4 4 7
14 maunds of wheat at 8 seers a rupee	..	70 0 0
12 maunds of wheat and gram, valued at ..	..	50 0 0
8 maunds of <i>gur</i> , valued at ..	..	60 0 0
<i>Total</i>	..	252 2 7

(x). The implements used by the cultivator with details of uses and costs are given on the next page; their average cost is Rs. 50/9/4 per year.

TABLE LXXIV.—*Giving details of Agricultural Implements used by R. A.*

XV. 1. (a). Case 3.	Implements	Time it lasts.	No. in his possession	Use. per implement.	Cost		Average cost per year		REMARKS
		Years			Rs	a p	Rs	a p	
1. <i>Hal</i> * (Plough)		4	1	Ploughing ..	1	0 0	0	4 0	
2. <i>Phala</i> (Ploughshare)		1½	1	„	0	8 0	0	5 4	
3. <i>Pathe</i> (Holder of ploughshare)		½	1	„	0	4 0	0	8 0	
4. <i>Pingah</i> (Wooden yoke)		4	1	Yoking the cat- tle for ploughing	0	12 0	0	3 0	
5. <i>Pingah</i> (Wooden yoke)		4	1	Yoking the cattle for irrigation.	0	12 0	0	3 0	
6. <i>Sohaga</i> (Clod crusher)		4	1	Levelling .	2	0 0	0	8 0	
7. <i>Kahu</i> (Spade)		10	1	Digging .	1	8 0	0	2 5	
8. <i>Khuli</i> or <i>gadala</i> (Spade)		10	1	„	1	0 0	0	1 7	
9. <i>Kulhari</i> (Small axe)		10	1	Chopping wood	0	6 0	0	0 7	
10. <i>Ramba</i> or <i>khurpa</i> (Trowel)		½	3	Hoeing and cut- ting grass	0	4 0	1	8 0	
11. <i>Daranti</i> (Sickle.)		4	3	Cutting grass and harvesting	0	4 0	0	3 0	
12. <i>Gandasa</i> (Chopper).		3	1	Cutting fodder	1	0 0	0	5 4	Purchased.
13. <i>Tangh</i> (4-pronged fork)		4	2	Collecting <i>bhusa</i> at the thresh- ing floor	1	0 0	0	8 0	Exchanged for 2 sheaves
14. <i>Sangi</i> (2-pronged fork)		2	1	Scattering har- vest on the threshing floor	0	3 0	0	1 6	
15. <i>Phalla</i> (Wooden framework).		3	1	Treading har- vest	0	4 0	0	1 4	
16. <i>Tangar</i> (Rope net).		6	2	Carrying <i>bhusa</i> .	3	8 0	1	2 8	Home made The san was purchased
17. Basket ..		½	1	Scattering man- ure and carry- ing <i>bhusa</i> .	0	3 0	0	6 0	Purchased
18. <i>Charsa</i> (Leather bag for irrigation.)		½	1	Drawing water .	16	0 0	32	0 0	Do.
19. <i>Kundal</i> or <i>Dakka</i> (Handle).		2	1	Lifting <i>charsa</i> ..	3	0 0	1	8 0	
20. <i>Lawn</i> (Rope).		½	1	For drawing the <i>charsa</i> out.	5	0 0	10	0 0	Home made. The san was purchased
21. <i>Bhoni</i> (Pulley).		10	1	„	4	8 0	0	7 2	Purchased
22. <i>Dhurra</i> (Iron axle).		10	1	Working pulley	1	8 0	0	2 5	Do.
				Average cost per year.	..		50	9 4	

*The cultivator supplies wood to the carpenter, and iron and coal to the blacksmith, who make the implements as part of their contract. For *hal* or *phala* two seers of grain is, however, given to the carpenter as remuneration for his labour.

(xi). No implements were hired during the year.

(xii) Expenses of pressing the cane crop have been estimated according to the prevalent rates as follows :—

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1. (a).
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	Rs.	a.	p.
Pressing the canes into 16 pairs of earthen jars ..	3	0	0
Oil for lubricating the machine	0	2	0
Soda for purification of the juice	0	2	0
<i>Total</i> ..	<u>3</u>	<u>4</u>	<u>0</u>

(xiii) Salt and medicine for cattle have been considered in (v) above
R. A. paid the *rakhas* (watchers) as follows .—

	Rs.	a.	p.
Maize : 4 seers valued at	0	5	4
Wheat : 4 „ „	0	8	0
<i>Total</i> ..	<u>0</u>	<u>13</u>	<u>4</u>

(xiv). R. A. has a cart which is used as a *gadda* as well as a *behli* after a slight modification of the upper parts. It was purchased for Rs. 60/- 3 years ago, and is expected to last 3 years more with one change of the wheels costing Rs. 20/-, at the end of which period it will be worth Rs. 6/- as firewood, plus Rs. 3/- for the parts now used in converting it into a *behli*. The cost of the cart per year, therefore, works out at Rs. 11/13/4.

Details are now given of the uses to which the cart was put during the year.

Work performed in connection with cultivation—

	Hrs.	Mts.
Carrying <i>chari</i> fodder home	2	20
„ canes to the pressing yard	9	20
„ dry cotton plants home	1	10
Carting maize harvest	5	50
„ wheat and gram to the threshing floor	3	30
„ <i>senji metha</i> harvest	4	40
„ manure to the fields	75	32
<i>Total in connection with cultivation</i> ..	<u>102</u>	<u>22</u>

Work performed independent of cultivation—

Plying cart for hire	28	0
Fetching clay for repairs	4	0
<i>Total independent of cultivation</i> ..	<u>32</u>	<u>0</u>

Grand Total .. 134 22

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Case
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Taking the work done during the year the cost of the cart works out at Rs. 0/1/5 per hour. The value of the work done in connection with cultivation, therefore, is Rs. 9/-, and of work done independent of cultivation Rs. 2/13/4. By plying the cart for hire during the year he earned Rs. 8/-.

(xv) Seed rates are the same as those given in Case No. 1. The seed for maize, *kamad*, cotton and *senji metha* was all home produced. R A. purchased *chari jowar* seed for Rs 2/- and wheat seed for Rs. 10/-. In the case of wheat and gram (*berra*) he borrowed $\frac{2}{5}$ ths of a maund undertaking to repay $1\frac{1}{4}$ times as much wheat valued at Rs 2/8/0. He purchased *sarson* seed for 4 annas

(xvi) At sowing time he gave 2 seers of maize to the *lohar* and *tarkhan* valued at Rs 0/3/3, and also 2 seers of wheat valued at Rs. 0/4/0.

(xvii). Weeding expenses have been included in (iv) above.

(xviii). All expenses of harvesting have been considered in (iv) above.

(xix). There were no deductions from the common heap.

(xx). Threshing and winnowing expenses have been taken into account in (iv) above.

(xxi). The only extraordinary expenses incurred were 2 *kanals* of spoiled cane which had to be rooted out in the *kharif* of 1921 and *chari* fodder sown instead; in *kharif* 1923 one *kanal* of cane *kharaba* was rooted out and *san* sown in its place. For hedging the cane crop R. A. cut thorny branches from his own trees and did the work of erecting himself.

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The Cultivator U. S. owns 508 *kanals* 14 *marlas* : 462 *kanals* 6 *marlas* XV.
cultivated, and 46 *kanals* 8 *marlas* uncultivated. 1. (a).

TABLE LXXV. A.—Statement showing Areas Sown with Kharif Crops
in the last Five Years by U. S. 4.

Year.	Area sown with particular crop		Kharif.							
			Chahr.				Barani			
			Matured		Kharaba		Matured		Kharaba	
	*Ks	Ms	*Ks	Ms	*Ks	Ms.	*Ks.	Ms	*Ks.	Ms.
<i>Chari fodder.</i>										
1920	75	4	..				35	16	39	8
1921	88	7	..		.		85	14	2	13
1922	110	12	.		..		105	8	5	4
1923	124	1			.		102	1	22	0
1924	132	18			.		132	18	..	
<i>Average for 5 years.</i>	106	4	..		..		92	7	13	17
<i>Masze</i>										
1920	.		..		..		.		..
1921	..	..	..		..		..		..
1922	..	30	0	30	0	..	..		..
1923	..	14	0	8	0	6	0	.	..	
1924	..	7	0	7	0	..	..		..
<i>Average for 5 years.</i>	10	4	9	0	1	4	..		..
<i>Kamad.</i>										
1920	..	..	..		..		..		..
1921	..	6	0	6	0	..	..		..
1922	..	6	0	6	0	..	..		..
1923	..	11	0	11	0	..	..		..
1924	..	10	0	10	0	..	..		..
<i>Average for 5 years.</i>	6	12	6	12	..		..		..

(Continued.)

* Ks.=kanals; Ms.=marlas : 20 marlas=1 kanal; 10³/₅ kanals=1 acre.

(Concluded)

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Year.	Area sown with particular crop.		Kharif.							
			Chahr.				Barani.			
			Matured.		Kharaba.		Matured.		Kharaba.	
	Ks.	Ms.	Ks.	Ms.	Ks.	Ms.	Ks.	Ms.	Ks.	Ms.
<i>Water Melons, Vegetables and Fruits</i>										
1920 ..	10	0					10	0	.	
1921 ..	8	0	.		..		8	0	.	
1922 ..	5	0	.		..		5	0	.	
1923 ..	..		..		..		.		..
1924 ..	.		.		.		.		..
<i>Average for 5 years.</i>	4	12	.		.		4	12	..	
<i>Mash</i>										
1920 ..	4	10	.		..		4	10	..	
1921 ..	2	0	.		.		2	0	..	
1922 ..	3	18	.		..		3	18		
1923 ..	.		..		..		..		.
1924 ..							..		..
<i>Average for 5 years</i>	2	2			..		2	2	..	
<i>Moth only in 1921</i> ..	4	10	.		.		2	0	2	10
<i>San only in 1923</i> ..	1	5	1	5	.		..		..
<i>Til</i>										
1920 ..	2	4	..		..		2	4	..	
1921 ..	..		..		..		.		..
1922 ..	0	8	..		..		0	8	..	
1923 ..	..		..		..		..		..
1924 ..	..		..		..		..		..
<i>Average for 5 years.</i>	0	10	..		..		0	10	..	

TABLE LXXV. B.—Statement showing Areas Sown with Rabi Crops in the last Five Years by U. S.

Year.	Area sown with particular crop.	RABI								XV. 1. (a). Case 4.
		Chaki				Barani.				
		Matured.		Kharaba		Matured.		Kharaba.		
		*Ks.	Ms.	*Ks.	Ms.	*Ks.	Ms.	*Ks.	Ms.	
<i>Wheat.</i>										
1921	..	1	15	1	15	..	..	..	..	..
1922	..	50	0	25	0	2	0	19	0	4
1923
1924	..	71	8	58	0	..	..	13	8	..
1925	..	59	0	43	0	3	0	8	0	5
<i>Average for 5 years.</i>		36	9	25	11	1	0	8	2	1
<i>Wheat and Gram only in 1923</i>										
..	..	66	3	41	0	..	..	25	3	..
<i>Melons.</i>										
1921	..	1	5	1	5	..	..	..	..	..
1922
1923	..	1	0	1	0	..	..	..	..	..
1924
1925	..	6	0	6	0	..	..	..	..	..
<i>Average for 5 years.</i>		1	13	1	13	..	..	..	..	..
<i>Onions and Vegetables.</i>										
1921	..	0	9	0	9	..	..	..	..	..
1922
1923	..	1	5	1	5	..	..	..	..	..
1924	..	2	0	2	0	..	..	..	..	..
1925
<i>Average for 5 years.</i>		0	15	0	15	..	..	..	..	..
<i>Senji metha</i>										
1921
1922	..	1	15	1	15	..	..	..	..	..
1923	..	30	0	30	0	..	..	..	..	..
1924	..	14	0	14	0	..	..	..	..	..
1925	..	7	0	7	0	..	..	..	..	..
<i>Average for 5 years.</i>		10	11	10	11	..	..	..	..	..
<i>Tobacco only in 1922</i>										
..	..	1	0	1	0	..	..	..	..	..
<i>Bajra only in 1922</i>										
..	..	0	15	0	15

* Ks.=kanals; Ms.=marlas: 20 marlas=1 kanal; 10 ²/₅ kanals=1 acre.

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1. (a).
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(ii). The working members in the family are three men, aged 50, 45 and 22 years, respectively. U. S. also employed on the holding, a labourer aged 35 years, and paid him Re 1/- per month plus food and clothing.

(iii). There were no partners in cultivation.

(iv). Details of payments, in cash or kind, services rendered, hours and days of work are now given

TABLE LXXVI—*Statement giving Details of the Labour employed by U. S. on his Holding.*

Crop.	Persons employed	Time taken	Service rendered	Payment made.	REMARKS.
		Hrs. Mts.			Rs. a. p.
Maize (7 ks. 0 ms)	Lohar and Tarkhan		Customary duties.	1 $\frac{3}{4}$ maunds of grain, which included their harvest dues.	Valued at 5 5 4
Kamad (Sugarcane) (10 ks. 0 ms)	Labourer.	276 0 (12 hrs a day— 23 days)	Cutting, cleaning and carrying canes to the yard; heating juice	32 seers of gur, daily food, and 1 $\frac{1}{2}$ seers juice for drinking per day; daily wash of pan and impurities, 4 canes and 1 tangar of trash and megas daily for 23 days	Value of payments made— Rs a p Gur 6 0 0 Food 4 5 0 Juice 2 2 6 Wash 2 14 0 Canes 0 5 9 Trash 0 8 0 Megas } Total 16 3 3
	Lohar and Tarkhan.	..	Customary duties.	28 seers of gur, plus 8 seers juice.	Valued at— Gur 5 4 0 Juice 0 8 0 Total 5 12 0
Chari fodder (132ks. 18ms.)	Lohar and Tarkhan	..	Customary duties.	2 bundles of the harvest.	Rs a p. Valued at 0 8 0
	5 Labourers	50 0 (10 hrs a day— 5 days)	Reaping.	Food for 5 days, plus 5 bundles of harvest daily.	Value per head per day— Rs a p. Food 0 3 0 Bundle 0 4 0 Total 0 7 0
Wheat (59 ks. 8 ms.)	Lohar and Tarkhan.	..	Customary duties.	1 $\frac{3}{4}$ maunds of wheat, plus 2 tangars of straw.	Rs a. p. Valued at— Wheat 8 0 0 Straw 2 0 0 Total 10 0 0

(Continued.)

(Concluded)

Crop.	Persons employed	Time taken.	Service rendered.	Payment made	REMARKS
Wheat— (contd)	Chamar	Hrs Mts 40 0 180 0 126 0	Weeding, watering, one threshing, and winnowing	3 1/5 maunds of wheat, one tangar of straw, and food for 34 days	Weeding 5 days at 8 hours a day; watering 20 days, at 9 hours a day; threshing, etc., 9 days at 14 hours a day. Payments valued at— Rs a p Wheat 18 0 0 Straw 1 0 0 Food 6 6 0 Total 23 6 0
Seng melha fodder. (7 ks. 0 ms)	Lohar and Tarkhan.	..	Customary duties.	2 bundles of the harvest	Rs a p. Valued at—0 8 0
	Chamar.	3 0	Cutting fodder	1 bundle of the harvest	Valued at—0 4 0

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(v) Details are now given of the cattle employed with the duties performed by them throughout the year.

TABLE LXXVII.—Statement giving Details of Work performed by Cattle in connection with Cultivation on U. S.'s Holding.

Crop.	No. of cattle employed.	Time taken	Work performed.	REMARKS.
		Hrs Mts.		
Charu fodder (132 ks 18 ms.)	4 cattle in 2 yoke	44 18	Ploughed for sowing.	The second yoke consists of one ox and one buffalo. The cattle ploughed 2 kanals in 3 hours, excluding stoppages.
	Do.	8 37	Used sohaga once on 70 kanals.	The 2 yoke covered 20 kanals in 2 hours 28 minutes.
	4 cattle, 1 yoke at work, 1 at rest.	41 40	Carting crop home (50 cart-loads).	Each trip took 50 minutes.

(Continued.)

(Continued.)

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 1. (a).
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Crop.	No of cattle employed.	Time taken	Work performed.	REMARKS.
Maize (7 ks. 0 ms.)	4 cattle in 2 yoke	H. s. Mts 11 40	Ploughed five times, including sowing time.	Time calculated as for <i>chari</i> above.
	Do	1 44	Used <i>sohaga</i> twice	Do
	4 cattle, 1 yoke at work, 1 at rest	56 42	Watered 9 times, including one meant for <i>senji meha</i> , which immediately followed maize as a catch crop	Irrigation was by bucket wheel in the <i>Bet</i> . The cattle irrigated 3 <i>kanals</i> in 2 hours 42 minutes, excluding stoppages.
	Do.	3 10	Carting the harvest to the yard (4 cart-loads)	Threshing and crushing was done by beating with heavy sticks
<i>Kamad</i> (Sugarcane) (10 ks 0 ms.)	4 cattle in 2 yoke	23 20	Ploughed 7 times, including sowing time.	Time calculated as for above.
	Do.	11 5	Used <i>sohaga</i> 9 times	Do.
	4 cattle, 1 yoke at work, 1 at rest.	45 0	Watered 5 times, including watering preparatory to sowing.	Irrigation was by bucket wheel in the <i>Bet</i> .
	Do.	210 0	Pressing.	One jar was filled in 1½ hours. The pressing was done on the farm, hence no carting of canes; <i>gur</i> was carried away on the head as made.
Wheat (59 ks 8 ms.) (<i>Chahi</i> 46 ks.; <i>Barrani</i> 13 ks. 8 ms.)	4 cattle in 2 yoke	139 24	Ploughed 6 times both <i>chahi</i> and <i>barrani</i> areas.	The cattle ploughed 12 <i>kanals</i> in 4 hours 40 minutes, excluding stoppages
	Do.	29 16	Used <i>sohaga</i> 4 times.	
	4 cattle, 1 yoke at work, 1 at rest.	165 36	Watered the <i>chahi</i> area 4 times.	Irrigation was by bucket wheel in the <i>Bet</i> . The harvest of this area was threshed on the farm and the grain carried home in baskets on the head.
	4 cattle in 2 yoke.	157 30	Threshing 375 bundles.	100 bundles were threshed in 42 hours by 4 cattle.
	4 cattle; 1 yoke at work, 1 at rest.	7 30	Carting home the produce (9 cart-loads).	

(Continued.)

(Concluded).

Crop.	No of cattle employed.	Time taken		Work performed.	REMARKS.
		Hrs	Mts		
<i>Senji mutha</i> fodder (7 ks 0 ms)	4 cattle; 1 yoke at work, 1 at rest	8	20	Carting home the harvest (10 cart- loads)	Watering, etc., has already been con- sidered under maize.
Melons (6 ks 0 ms.)	4 cattle in 2 yoke	10	0	Ploughed 5 times	Melons were grown mixed with the cotton crop of <i>kharif</i> 1925. Work done in con- nection with melons is only taken into account
	Do.	2	13	Used <i>sohaga</i> thrice.	
	4 cattle; 1 yoke at work, 1 at rest	21	36	Watered 4 times	Irrigation was by bucket wheel in the <i>Bet</i>
	Do.	17	30	Carting manure for next maize crop (21 cart-loads).	
	Do	12	30	Carting manure for <i>chahi</i> wheat (15 cart-loads)	Manure was for one plot of 5 <i>kanals</i> .
TOTAL WORK OF ONE YOKE		1,028	41		

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Cattle (either one yoke or two) were at work during the year for 1,028 hours 41 minutes. All four were simultaneously at work for 439 hours 7 minutes, which gives in terms of the working time of one ox 1,756 hours 28 minutes. They worked alternately, two at work and two at rest, for 589 hours 34 minutes—in terms of the working time of one ox for 1,179 hours 8 minutes. Thus, in terms of the working time of one ox, the total work done comes to 2,935 hours 36 minutes, and this distributed between the 4 oxen gives as the average for the year 733 hours 54 minutes.

(b). U. S. did not use his cattle for any purpose not connected with cultivation. The reason for this is that he is a large owner and during the year his tenants perform such services for him. All the cattle were home-bred, and it is therefore not possible to give an estimate of their capital cost as has been done in the other three cases. It is also difficult in the case of U. S. to give an estimate of the value of the fodder consumed by his plough cattle during the year, since he keeps a large number

XV. of cattle, milch and otherwise, in addition to his plough cattle and he feeds
1. (a). all these from the same store Moreover, fodder which comes to him
Case from tenants in the form of share rents, he stores and uses with his own.
4. It was, therefore, considered advisable in this case to rely on personal inquiry.

U. S., and his uncle S. S., who is considered to be a sensible *zemindar*, when questioned, estimated that the three plough oxen and the plough buffalo had eaten during the year the following fodder :—

		Rs.	a.	p.
i.	60 <i>tangars</i> of wheat straw, valued at ..	60	0	0
ii.	16 <i>kanals</i> of <i>chari</i> fodder, valued at ..	64	0	0
iii	8 <i>kanals</i> of <i>senji metha</i> fodder (a good crop), valued at	56	0	0
<i>Total</i> ..		180	0	0

U. S. never disposes of fodder by sale. Details are given below of the fodder produce which he grew or got from his tenants during the year :—

		Rs.	a.	p.
Maize fodder (3 light cart-loads) ..	..	12	0	0
<i>Chari</i> fodder, 132 <i>kanals</i> 18 <i>marlas</i> at Rs. 4/- per <i>kanal</i> .. ..	..	531	8	0
Wheat straw, 125 <i>tangars</i> , valued at ..	..	125	0	0
<i>Senji metha</i> (a good crop) 7 <i>kanals</i> , valued at ..	..	49	0	0
<i>Total</i> ..		717	8	0

It has already been shown that fodder worth Rs. 180/- only was given to the cattle. Thus there has been a surplus in the year's stock valued at Rs. 537/8/0

During the year he fed to the cattle 16 seers of wheat (home produced) valued at Rs. 2/6/0, and 16 seers of *gur* (home produced) valued at Rs. 3/-, making a total of Rs. 5/6/0 on these two items. No salt was given to them during the year, and nothing was spent on medicines. The annual cost of the cattle, as declared by U. S. and his uncle S. S., was thus Rs. 185/6/0

or Rs. 46/5/6 per head. Each worked for 733 hours 54 minutes, so the cost per head per hour of work is slightly over one anna, or for the 4 cattle a little above 4 annas. XV.
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(vi). No cattle were hired during the year for any purpose.

(vii) The manure used was farmyard manure and all sorts of sweepings. It was all home produced and was applied in the usual way, being placed in heaps in the fields from 1 month to 5 months, before being spread preparatory to sowing. U. S. takes 3 to 4 crops in quick succession from the manured area. When growing maize the plot was first manured with 3 cart-loads of manure per *kanal*, and maize was followed by *senji* in the *rabi* and sugarcane in the next *kharif*. The plot, which was similarly manured for growing wheat, was put under cotton and melons in the *kharif* and then *senji* immediately after. The melon plants after they ceased to yield fruit were allowed to rot in the land and serve as manure.

(viii). The estimate of fodder produced has been considered in (v) above.

(ix). The cost of the upkeep of the plough cattle has been given in (v). An estimate of the grain and *gur* that he produced during the year is now attempted. The values have been taken at the rates current in the village at the harvest time.

			Rs.	a.	p.
70	maunds wheat, valued at	..	..	350	0 0
10	, maize, ,,	..	..	33	5 4
35	,, <i>gur</i>, ,,	..	..	262	8 0
			<hr/>		
<i>Total</i>			..	645	13 4
			<hr/>		

U. S. did not sell his melons, but the fruit was consumed in the household or given to friends and relatives. He was offered Rs. 10/- per *kanal* for 6 *kanals* by a vegetable seller, and the offer was regarded as fair, but he refused. Taking this value for the melons we get a grand total of Rs. 705/13/4 for the crops grown by him during the year.

(x). The implements used by the cultivator, with details of uses and cost, are given on the next page ; their average cost is Rs. 9/12/4 per year.

TABLE LXXVIII.—*Giving details of Agricultural Implements used by U. S.*

XV. I. (a) Case 4.	Implements.	Time it lasts	No in his possession.	Use.	Cost per implement.	Average cost per year.	REMARKS.
		Yrs.					
	1. <i>Hai</i> * (Plough).	4	2	Ploughing	1 0 0	0 8 0	
	2. <i>Pha'a</i> (Ploughshare)	1½	2	"	0 8 0	0 10 8	
	3. <i>Patki</i> (Holder of the share)	½	2	"	0 4 0	1 0 0	
	4. <i>Pinjali</i> (Wooden yoke)	4	2	Yoking the cattle for ploughing.	0 12 0	0 6 0	
	5. <i>Pnyai</i> (Wooden yoke)	4	1	Yoking the cattle for irrigation.	0 12 0	0 3 0	
	6. <i>Sohaga</i> (Clod crusher).	4	1	Levelling	2 0 0	0 8 0	
	7. <i>Kahi</i> (Spade).	10	1	Digging	1 8 0	0 2 5	
	8. <i>Khuth</i> or <i>gadala</i> (Spade).	10	1	"	1 0 0	0 1 7	
	9. <i>Kuthari</i> (Small axe).	10	1	Chopping wood	0 6 0	0 0 7	
	10. <i>Ramba</i> or <i>khurpa</i> (Trowel)	½	3	Hoeing and cut- ting grass.	0 4 0	1 8 0	
	11. <i>Daranti</i> (Sickle).	4	4	Cutting grass and harvesting	0 4 0	0 4 0	
	12. <i>Dai</i> (Sickle with- out teeth).	10	1	Cutting fodder	0 4 0	0 0 5	
	13. <i>Bangri</i> (Hoe)	3	4	Hoeing	0 4 0	0 5 4	
	14. <i>Tangli</i> (4-pronged fork)	4	2	Collecting <i>bhusa</i> at the thresh- ing floor.	1 0 0	0 8 0	Purchased
	15. <i>Sangi</i> (2-pronged fork)	2	1	Scattering har- vest on the threshing floor.	0 3 0	0 1 6	
	16. Ropes	1½	2	For yoking and tying.	1 0 0	1 5 4	Made at home from <i>san</i> .
	17. <i>Phalla</i> (Wooden framework).	3	1	Treading har- vest	0 4 0	0 1 4	
	18. <i>Ohhiki</i> (Muzzle.)	3	4	Muzzling cattle	0 2 0	0 2 8	Made at home from <i>san</i>
	19. Basket*	½	3	Carrying <i>bhusa</i> , and scattering manure.	0 3 0	1 2 0	
	20. <i>Karah</i> (Earth board.)	10	1	Levelling	1 12 0	0 2 10	
	21. <i>Gandasa</i> (Chopper).	3	2	Cutting fodder	1 0 0	0 10 8	Purchased
				Average cost per year.	..	9 12 4	

* The cultivator supplies wood to the carpenter, and iron and coal to the blacksmith, who make the implements as part of their contract for *hai* or *phala* two seers of grain is, however, given to the carpenter

† Twigs were supplied by the cultivator, the *jhiwar* prepared the baskets keeping half the articles so made as remuneration for his labour.

U. S. irrigates his land from a bucket wheel he set up on his own well in the *Bet*. Five years ago the wheel was purchased for Rs. 240/-, and during this period he has spent Rs. 15/- on repairs. It should last another 15 years, but within that time will require replacement of buckets and other parts with an expenditure of Rs. 100/-. This figure was given as an estimate both by a wheelwright and the cultivator. The cost of the wheel, therefore, for 20 years works out at Rs. 340/-, or Rs. 17/- per year. During the year U. S. used mustard oil worth Rs. 6/- for lubricating the wheel and thus the annual cost of working the well comes to Rs. 23/-. A tenant applies much less oil, as he is not responsible for the purchase or replacement of wheel.

(xi). No implements were hired during the year.

(xii). He used his own press for pressing canes but he does not remember what he paid for it or what it costs to maintain. The cost of making 35 maunds of *gur* has, therefore, been estimated at the rates prevalent for hire in the village as follow:—

			Rs.	a.	p.
Pressing the canes into 70 pairs of jars	..		13	2	0
Oil for lubricating the machine and soda for purification of the juice	..	..	1	8	0
<i>Total</i>	..		<u>14</u>	<u>10</u>	<u>0</u>

(xiii). As was noted previously he spent nothing on salt and medicines for cattle during the year, neither did he incur any expenditure on repairs. Carriage of manure to the fields has been considered in (v) above. He gave to the *rakhas* at the following rates from the common harvest:—

				Rs.	a.	p.
Maize: 4 seers at	..	..	..	0	5	4
Wheat: 4 „ „	..	..	..	0	8	0
<i>Total</i>	..			<u>0</u>	<u>13</u>	<u>4</u>

(xiv). The cart is owned by the cultivator, and details are given of the uses in connection with cultivation to which the cart has been put during the year. He does not ply it for hire nor use the cart for any work independent of cultivation.

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Work performed in connection with cultivation—

		Hrs	Mts.
Carrying home <i>chari</i> fodder crop (50 cart-loads) .		41	40
„ maize harvest to the yard (4 „) ..		3	10
„ home the wheat harvest (9 „) .		7	10
„ „ <i>senji</i> fodder (10 „) .		8	20
Carting manure to maize fields (21 „) ..		17	30
„ „ to wheat „ (15 „) ..		12	30
<i>Total in connection with cultivation</i> .		<u>90</u>	<u>20</u>

Three years ago the cultivator purchased the cart for Rs. 30/-. It is expected to last another 7 years more by the replacement of wheels costing Rs. 20/-, after which the cart would be worth Rs. 5/- as fuel. The cost of the cart per year, therefore, is Rs 4/8/0

(xv). Seed rates per acre for different crops are the same as those given in Case No. 1. The cultivator purchased 4 maunds 4 seers of *chari* fodder seed for Rs. 16/6/6 and the rest of the seed he used was home produced.

(xvi). No additional expenses were incurred for sowing. The dues of the *lohar* and *tarkhan* for sowing were included in the figures given in (iv) above.

(xvii). Expenses of weeding have been taken into account in (iv) above.

(xviii). Harvesting expenses have been considered in (iv) above.

(xix). There were no deductions from the common heap.

(xx). Threshing and winnowing expenses have already been considered in (iv) and (v) above.

(xxi). The cultivator was involved in no extraordinary expenditure during the last five years as a result of bad seasons, floods, etc. On hedging, the making of boundaries, etc he did not spend anything worthy of mention.

1 (b) —GENERAL

(i). Two statements are given below showing the number of live-stock in the village from 1904 to 1925. Figures up to 1923 have been taken from the cattle census, while those for 1925 are the figures collected by the investigator during the year. XV.
1. (b).

TABLE LXXIX. A.—*Showing Numbers of Live Stock in Tehong from 1904 to 1914*

Year	Bulls and bullocks	Cows	Male buffaloes	Female buffaloes	Young stock of cows and buffaloes	Sheep	Goats.	Horses and ponies	Mules	Donkeys.	Camels
1904 ..	599	214	80	164	365	4	529	14	1	17	..
1908-09 ..	563	269	80	174	407	60	316	18		18	3
1914 .	618	272	66	192	391	51	263	17		26	..

TABLE LXXIX. B.—*Showing Numbers of Live Stock in Tehong from 1920 to 1925.*

Year.	Bulls.	Bullocks	Cows	Calves	Male buffaloes.	Female buffaloes.	Young stock of buffaloes	Sheep	Goats	Horses.	Mares	Young stock of horses.	Mules	Donkeys	Camels.
1920 ..	1	440	163	299	44	190	114	82	174	9	6	1		21	.
1923 ..	1	487	216	370	53	120	230	96	311	11	6		13	3	..
1925 ..	1	447	155	340	59	183	160	35	248	6	7		.	15	1

The tendency in general is to use only such manure as is available. If necessary, it is purchased or obtained in exchange for fodder from those who have no land on which to use it, but there is a general complaint of scarcity. *Barani* lands are never manured and even *chahi* lands are not often manured to grow wheat. Maize is practically the only crop grown after manuring, for it gives poor results otherwise, and because 2 to 4 crops follow on the same field in quick succession. The crops following on maize are manured only if their growth is weak. When other manure is wanting, green manuring is sometimes tried if the land in question seems exhausted. For this purpose *san* (hemp) is usually sown on the land, and when

XV. the plants are young and green they are ploughed in. *Kallar* or the earth of old runs is also applied when other manure is lacking. Chemical manures are never used.

(ii). The owners of cattle do not sell the bones of dead animals. The carcases are claimed by *chamars* and *khakrobs* (sweepers) as their right and they sell the bones to the *khakrobs* of neighbouring villages who sell them at railway stations, such as Phagwara and Phillour, to contractors or agents, who in turn forward them to some company, to convert them into bone manure.

(iii) Apart from fallow lands, there are no areas specially set apart for grazing ; nor is there any record of such ever having been the case. *Banjar* (waste) in the year 1904 amounted to 85 acres and in 1924 to 177 acres.

(iv). There is no government forest or *rakh* close to the village. There is a *rakh* at Phillour about 3 miles away, but it is not used by the villagers for grazing their cattle.

(v). The sources of fuel in the village are wood from trees and dried branches of old hedges, broken wood implements, old ceilings, dry cotton plants, *trash* and *megas*, dry fodder refused by the cattle (especially of *chari* and maize), and cow-dung cakes which are very largely used for all heating and cooking. For lighting the *hukka* a cow-dung fire is preferred, and in *takias* (resting-places), where a fire is always kept going for starting *hukkas*, cow dung alone is used. With the exception of *Sikhs*, who are forbidden by their religion to smoke, but who here form only a small minority, all other sections of the population are largely given to smoking. The *zemindars* when at work in the fields keep cow-dung smouldering under ashes the whole day long for setting their *hukkas* alight. It is also used when mixed with clay, for plastering the floors and walls of *kachcha* houses. The womenfolk who are responsible for cooking, keep considerable quantities of cow-dung always in stock. Non-cultivating families having no land, convert the whole of their cow-dung into cakes for burning, except for about two months in the year when, owing to the fact that the cattle are fed on green fodder only, their droppings are too thin to be made into cakes. Even in the case of cultivator's families the women have their way, even though the men may complain about the scarcity of manure. *Khakrobs*, while sweeping and performing other duties for their owners, stealthily take away dung cakes for their own use ; *ghumars* and *kamins* collect dry dung from the fallow lands to burn it themselves. An average family burns about 2 maunds of dry cow-dung cakes per mensem or 24 maunds or 2

cart loads per annum. The 510 families of the village, therefore, burn on the average 1,020 cart-loads of dry dung cakes during the year. XV.
1. (b).

One pair of oxen produces about 11 cart-loads of manure in a year. The 448, oxen in the village, therefore, produce about 2,464 cart-loads per annum. A cow produces less and a buffalo more dung than an ox. The 242 buffaloes and 155 cows in the village may thus be taken as roughly equivalent to 397 oxen, giving an output of 2,183 cart-loads of dung per annum. There are also 340 cow-calves and 160 buffalo-calves, all below $3\frac{1}{2}$ years, and since a pair of calves produces roughly as much manure as an ox, the 500 calves give an output of about 1,375 cart-loads per annum. The total cow-dung produced in the village is thus about 6,022 cart-loads. Cow-dung in being converted into fuel cakes loses $\frac{3}{8}$ ths of its original weight through evaporation, hence the 1,020 cart-loads of dry cow-dung cakes which the village burns in the course of the year would require 2,550 cart-loads of manure for their preparation. Thus of the 6,022 cart-loads of cow-dung produced in the year, some 2,550 cart-loads are used for fuel; in other words, about 42 per cent. of the best manure of the village is burnt.

(vi). As already stated the Phillour *rakh* is at a distance of 3 miles; but the villagers do not obtain fuel from there.

2.—WELL CULTIVATION.

(a).—Particular Holdings.

Case No. 1.

(i). K. and N. B., two brothers, jointly sunk a well in the *Dhaha* in the year 1915. They performed the necessary unskilled work themselves and also undertook the supervision. A year earlier, in 1914, they tried burning the bricks needed for the well themselves, but the enterprise failed and they suffered a loss of Rs. 250/-, which they had saved in the previous year. In 1915 bricks had to be purchased and the well cost them Rs. 600/-. XV.
2. (a).

(ii). N. B. borrowed Rs. 300/- for the well from a money-lender on interest at $18\frac{3}{4}$ per cent. per annum on two different bonds of Rs. 140/- and Rs. 160/-. The first loan was paid off in $4\frac{3}{4}$ years and the second in 8 years 10 months. K. also borrowed Rs. 300/- for the well. He borrowed Rs. 100/- from a money-lender on the same rate of interest as his brother

XV. (18½ per cent.), and Rs. 200/- from his relatives without interest. The 2. (a). loan of Rs. 100/- he was able to pay off in 3½ years, but the second has yet to be repaid.

(iii). The expenses of maintenance of a well are wholly borne by the owner. The tenant has nothing to do with that. K. and N. B. spent Rs. 40/-, eight years after the well was sunk, on building *chahlas* (tanks from which water passes on to different channels). They have spent nothing else since sinking the well.

Case No. 2.

(i-ii). M., G. and A. jointly sunk a well in the *Bet* in the year 1920, having equal shares in it. It cost them Rs. 400/-. In the case of A. and G., all the capital used was their own, but M. borrowed from his relatives Rs. 70/- without interest and this loan was paid off in 3 years. Both supervision and unskilled labour were provided by the owners themselves, but the bricks were purchased.

(iii). Since the sinking of the well nothing has been spent for repairs or maintenance.

Case No. 3.

(i). M. B. sunk a well in the *Dhaha* in the year 1921, (a year of very high prices), at a cost of Rs. 1,800/-. Labour of all sorts was hired, but the bricks were purchased four miles away. Of the 40,000 required, 30,000 were carted by M. B. and his friends and relatives, to whom only food was given for the work, for carting the remaining 10,000 he paid Rs. 100/-.

(ii). The owner borrowed Rs. 700/- from the village Co-operative Society at 9½ per cent. interest, and the rest of the capital was his own. Rs. 355/- has been paid off to the Society in 3 years and the rest of the loan has yet to be repaid. In the year 1923, he borrowed a further sum of Rs. 325/- from the Society to set up an iron bucket wheel on the well. This amount also has still to be repaid.

(iii). For repairs, etc., he has spent nothing so far.

Case No. 4.

(i). N., B., M. and A. jointly sunk a well in the *Dhaha* in 1921, the year in which M. B. also sunk his well. It cost them Rs. 1,250/-. The bricks were purchased, but they did the supervision and unskilled labour themselves and also the carting of bricks.

(ii). N. borrowed Rs 120/- from the Co-operative Society and repaid the loan in $3\frac{1}{2}$ years B borrowed Rs 300/- from the Society, of which he has repaid Rs. 210/- in 4 years leaving Rs 90/- still to be paid off M. and A. jointly borrowed from a money-lender the sum of Rs 100/- at $18\frac{3}{4}$ per cent. interest and paid off the loan in 3 years XV.
2. (a).

(iii) Since the sinking of the well the owners have spent nothing for repairs or maintenance

Case No 5.

(i) T sunk a well in the *Dhaha* about 20 years ago at a cost of Rs 450/-. Supervision and unskilled labour were provided by himself, and the bricks were purchased

(ii). He borrowed Rs 200/- from his relatives the rest of the capital being his own The sum borrowed was without interest and it was paid off in 4 years

(iii). During the 20 years he has spent Rs. 100/- on sinking an iron tube in the well about 7 years ago ; nothing else has been spent on maintenance or repairs

(b).—GENERAL.

(iv-v). The cost of sinking a well depends on the diameter of the well, the situation of the site, the depth of the masonry work, the price of bricks, and their transport, and the labour employed. *Zemindars* often co-operate in providing the labour and sometimes also in carting bricks. Lime they generally prepare here themselves by burning nodules or gravel which are collected from the *shamilat*. A cultivating owner however, who does the supervision and undertakes the work himself or co operatively by calling in the assistance of others, cannot attend properly to the cultivation of one harvest. XV
2. (b).

The present cost of sinking a well in the *Dhaha* can be judged from an actual case in the year 1925, (the year of investigation), when D., A. M. and K., J. and D, and A (four parties) jointly made the following expenditure.

XV. 2 (b).	Bricks purchased—	Rs.	a.	p.
	33,760 at Rs. 15/- per 1,000	..	506	4 0
	4,500 „ Rs. 14/- ,	..	63	0 0
			<hr/>	569 4 0
	Cost of <i>gand</i> or <i>chakla chob</i> , including wages of			
	the carpenter	..	..	76 0 0
	Payment made to divers—			
	Cash	..	98	0 0
	One he-goat	..	..	8 0 0
	Payment made to masons	..	..	60 0 0
	Dung-cakes for preparing lime, purchased	..	7	2 0
	„ „ , home produced	..	14	4 0
	Cement and lime. purchased	..	..	4 12 0
	12 baskets for throwing out clay (these got worn			
	out and were discarded after use)	..	2	0 0
	Food provided for masons and divers.—			
	<i>Gur</i> , home produced 4 maunds, valued at		30	0 0
	Wheat flour „ 4 „ „ „		33	2 0
	<i>Ghi</i> , „ 12 $\frac{4}{5}$ seers, „		26	0 0
	Rice, purchased 32 seers „ „		8	0 0
	Expenditure in ceremonies connected with			
	the sinking of a well* ..	..	..	15 0 0
	<i>Total Expenditure</i>	..	<hr/>	951 8 0

Thus the cost of sinking a well in the *Dhaha* in 1925 on the assumption that the labour and the carting of bricks was performed by the owners themselves was Rs. 951/8/0. It was Rs. 1,250/- in 1921, Rs 600/- in 1915, and only Rs. 450/- in 1905. The cost of sinking a well in the *Bet* is much

*This expenditure was incurred at the time of letting down of the *chakla chob* and on other occasions and is made up as follows—*Qazi* Re. 1/-; *tarkhans* Rs. 5/-; *jhiwars* Rs. 2/-; *bharat* Re. 1/-; divers Rs. 5/-; masons Re. 1/-.

less and worked out as above we get the following figures:—

XI
2. (

At present (1926)	.. Rs. 350/-
5 years ago (1921)	.. ,, 400/-
10 ,, ,, (1915)	.. ,, 300/-
20 ,, ,, (1905)	.. ,, 225/-

(vi). The *chakla chob* or *gand* is made from the wood of trees found in the vicinity, such as *pular*, *shisham*, *kikar* or *plah* trees, if one kind of wood runs short, any of the others mentioned is used. The cost of a *chakla chob* depends on the wood of which it is made and the inner diameter of the well. *Bet* wells are generally narrower than *Dhaha* wells. A *Dhaha* well varies from $5\frac{3}{4}$ hands ($8\frac{5}{8}$ feet) to 7 hands ($10\frac{1}{2}$ feet) in diameter, and a *Bet* well from $4\frac{3}{4}$ hands ($7\frac{1}{8}$ feet) to 7 hands ($10\frac{1}{2}$ feet) in diameter. The price of a *chakla chob* for *Bet* wells is from Rs. 30/- to Rs. 40/-, and for *Dhaha* wells from Rs. 70/- to Rs. 80/-.

The length of time a *chakla chob* lasts had not been observed nor could it be estimated by any one. It goes down deep into the water; whether it decays there or not does not affect the structure above. The weight of the masonry work above makes the structure settle firmly into its foundation, even if the *chakla chob* becomes decayed, no one has spent money because one decayed.

(vii). There are at present (1926) 100 wells in the village. 18 of these are worked with wheels of iron buckets and the remainder with leather bags. Of the total number only one is *dobidda*, i.e., having two *bidds* or wheels on which two leather bags can be worked at the same time, and this well is without a wheel. Wheels on all the 18 wells are single, i.e., they can be worked with 2 cattle only at a time.

The number of bullocks used for the well depends upon the area cultivated. If cultivation is done with one plough (2 cattle) only two cattle are used for working the well; if with 2 ploughs (4 cattle) all the four are used in two pairs alternately to draw up the irrigation bag. In working a wheel only two cattle or one yoke can be employed at a time. A cultivator using 3 cattle cannot work the well with all three at once; two are employed alternately and one is always at rest.

XV.
2. (b).

It is difficult to ascertain how many bullocks are used for ploughing an average sized well-holding. *Zemindars* own fragments of both kinds of soil, *chahi* and *barani* and cultivation is also partly of one and partly of the other. No case was found in which a cultivator confined himself solely to the cultivation of *chahi* land. According to the quadrennial year 1923-24, there are 99 wells and the total *chahi* area, including *chahi mastar* (areas watered from other's wells), is 894 acres. The average area per well, therefore, is about 9 acres. Under existing conditions a cultivator with 2 cattle (one yoke) can cultivate from 32 to 47 *kanals* of *chahi* land in addition to 40 to 25 *kanals* of *barani* area. The wells are owned in shares because the fragments of land around them are owned by different persons. Thus a cultivator can plough only what *chahi* area he has.

To take a few specific instances. K., son of G. (*patti* San Chak) has cultivated during the year with two cattle, 6.83 acres : 3.02 acres *chahi* and 3.81 acres *barani*.

R., son of S., has cultivated during the year with two oxen 5.4 acres : 3.39 acres *chahi* and 2.01 acres *barani*.

N., son of N. (*patti* Masani) has cultivated with two cattle, 6.8 acres : 4.43 acres *chahi* and 2.35 acres *barani*.

M. B. with five cattle has cultivated during the year, 23.53 acre : 9.05 acres *chahi* and 14.09 acres *barani*.

U., son of K. (*patti* San Chak) has cultivated with five cattle, 21.3 acres : 12.12 acres *chahi* and 9.02 acres *barani*.

The absence of actual instances makes it impossible to say how many bullocks are used for ploughing a well-holding of average size. The *zemindars* express the opinion that for the cultivation of 9 acres of *chahi* land 4 bullocks would suffice.

CHAPTER XVI.

CONSUMPTION.

1. The following classes of the village population have been taken for separate examination — XVI.
1.

- (a) Well-to-do land-owners.
- (b). Small land-owners and well-to-do tenants.
- (c) Small tenants and agricultural labourers.
- (d). Village menials.
- (e) Well-to do non-agriculturists.

(a). WELL-TO-DO LAND-OWNERS.

Well-to-do land-owners take 3 meals a day, *viz*, *chhahwela* (breakfast), *dopehra* (midday) and *ratwela* (evening), for 8 months from *Chet* to *Katak* (the middle of March to the middle of November), and 2 meals a day—(breakfast being cut out)—for the other 4 months from *Maghar* to *Phagan* (the middle of November to the middle of March). Wheat in the former period and maize in the latter period are the staple cereals.

During the cane pressing period in the winter months, cultivating owners of this class almost invariably have cane-juice as a substitute for breakfast. The time during which pressing is in progress depends upon the area under the crop and the number of workers employed, but ordinarily it takes 4 to 5 weeks. Twice or thrice in this period, juice *kheer*, which is rice boiled in cane-juice, is eaten at one or other of the two meals, and it invariably forms part of the fare on the day of the *Lohri* festival and the day on which cane pressing begins. Milk is generally added to the juice *kheer* to improve its flavour and make it tasty, and it is eaten with sour curds as the first meal of the day.

In the other 8 months for about 2 or 3 weeks in *Asoj* and *Katak* (the middle of September to the middle of November) roasted maize cobs are eaten at different times of the day according to taste and appetite and *lassi* (butter-milk) is drunk afterwards. For about a month in *Har-Sawan* (July) melons, generally home produced, and mangoes to a less extent are eaten instead of breakfast, the former being taken with *gur sherbet* and the latter with *kachchi lassi* (milk and water). *Gur sherbet* is also drunk during the summer as a palliative against the heat.

xvi. ^{1.} Parched grain of gram, maize, *jowar* or wheat with *gur* is generally eaten throughout the year by all classes of the village population in the afternoon, though maize and gram are the grains most often roasted. Boiled grains are also sometimes eaten, especially by the womenfolk. Land-owners of this class keep milch cattle varying in number from 1 to 3, according to the size of the family, so that they may always have milk, *ghi* and *lassi*. *Lassi* or sour curds and *chapattis* smeared with *ghi* often form their breakfast, and sometimes *achchar* (pickles) or ordinary salt is included. Butter is also eaten occasionally with *chapattis*. *Lassi* is drunk with the midday meal, but rarely if ever with the evening meal. For all meals *chapattis* are rubbed with *ghi*, both for the members of the family and for dependents, though for the latter the coating is very thin, these *chapattis* eaten with vegetables or pulses cooked separately or together in *ghi*, comprise the morning and evening meal.

The quantity of *ghi* consumed by families, except under certain circumstances, is comparatively small. Men eat *ghi* or butter mixed with sugar about twice a week. Women eat this also but in relatively smaller quantities, except during childbirth, when a woman may consume from 10 to 12 seers in the form of different confections. Two dishes, one of pulses and another of vegetables or *khatta*, a preparation from sour curd or cheese, is another variation taken once or twice a month. In winter 2 to 4 fried eggs are eaten by one male member or the other about thrice a week both in the case of Hindu and Mohammedan families. If there is a special guest on a visit, eggs take the place of the second dish, or goat's meat or fowl is served instead. If meat or eggs are not being served, the guest is entertained with *kheer* (rice boiled in milk) or *halwa*, (a preparation of flour and ghee in addition to the other items of the daily fare. When special dishes are prepared they are shared by the family members, though the share may amount to little more than a taste. Muslim women generally eat eggs and meat; Hindu women have religious objections to their use, while among the Sikhs the women eat eggs and meat occasionally. When entertaining a guest *Jats* will also offer liquor, while *Arains* prefer to entertain with meat, eggs or boiled *Sawian* (ground wheat prepared with *ghi* and sugar). Meat is consumed by *Arains* about 3 times a month; Sikh *Jats* eat it about once a month in winter and thrice a month in summer when hares may be caught, and add variety to the dietary. The low consumption of meat by Sikh *Jats* is partly accounted for by the fact that meat eaten by them must be specially slaughtered (*i.e.*, by *jhatka*—killed by one blow), and this village being largely Mohammedan has no *jhatka* shop.

In the four cold months the dish eaten at the evening meal generally consists of *sag*, which is a preparation made from the green shoots of mustard plants or flowers of gram plants or both combined, midday meals consist of pulses mostly and of vegetables occasionally.

Milk is consumed daily, sometimes alone and sometimes with tea. The amount is about half a seer (16 ozs) per meal for males over 15 years of age, $1\frac{1}{2}$ *paos* (12 ozs) per woman and per male between 10 and 15 years, one *pao* (8 ozs) per child between 5 and 10 years, and half a *pao* (4 ozs.) per child under 5 years. When milk is scarce in the house the share of the woman is reduced and may vanish altogether.

Well-to-do land-owners eat wheat for eight months and maize for four months in the year. The rates of consumption per month of 30 days for male and female for cereals, ghi, sugar and pulse, as estimated approximately by the investigator from observations, is given in the following tables. In the four winter months pulses are ordinarily eaten only at the midday meal. *Sag* is generally eaten at the evening meals during this period, and its use reduces the consumption of pulses, which are reserved mainly for the other eight months of the year.

TABLE LXXX.—*Showing the Average Monthly Consumption of Cereals, Ghi, Sugar and Pulses by Well-to-do Land-Owners.*

(a). *Cereals.*

	Seers.	Equivalent in ozs.
Below 5 years of age .. .	5.62	180
Between 5 and 10 years .. .	10.31	330
" 10 " 15 " .. .	15.93	510
" 15 " 25 " . . .	20.62	660
" 25 " 55 " . . .	26.25	840
Over 55 years of age . . .	20.62	660

(b). *Ghi.*

	MALES.		FEMALES.	
	Seers.	Equivalent in ozs.	Seers.	Equivalent in ozs.
Below 5 years of age .. .	0.50	16	0.37	12
Between 5 and 10 years .. .	0.75	24	0.50	16
" 10 " 15 " .. .	1.25	40	1.00	32
" 15 " 25 " .. .	2.50	80	1.50	48
" 25 " 55 " .. .	2.00	64	1.25	40
Over 55 years of age .. .	1.75	56	1.00	32

NOTE.—*Ghi* consumed by women at childbirth is not included in the above statement.

(c). *Sugar and Gur.*XVI.
1.

	Seers.	Equivalent in ozs.
Below 5 years of age	0·75	24
Between 5 and 10 years	1·25	40
„ 10 „ 15 „	2·00	64
Over 15 years of age { males ..	3·00	96
{ females ..	2·50	80

(d). *Pulses.*

	Seers.	Equivalent in ozs
Below 5 years of age	0·32	20
Between 5 and 10 years	1·25	40
„ 10 „ 15 „	1·87	60
Over 15 years of age	2·50	80

In order to confirm the results given above, the family of H. S., a well-to-do land-owner, was studied in detail. His family and dependents are :—

Male.	Age.	Female.	Age.
	Years.		Years.
1 (himself) ..	45	1 (his wife) ..	40
1 son ..	13	1 daughter ..	18
1 permanent servant ..	35	(She stays with him only for about 6 months in the year)	
1 „ dependents ..	60	1 sister ..	40

In addition to the above, his sweeper gets 2 *chupattis* daily with *dal* ^{XVI}₁ and H. S. feeds two dogs permanently. We could, therefore safely add one more member of between 10 and 15 years of age so far as the consumption of wheat and maize is concerned.

The consumption of cereals by the family during the year was as follows.—

	Mds.	Srs.	Mds.	Srs.
<i>Wheat</i> —				
In stock at the beginning of the year	..	40	0	
(a). Given to menials during the				
year	4	32		
(b) Sold by his wife during the year	2	0		
(c). Expended on social observances	0	32		
(d). Stock in hand at the end of the				
year	1	8		
		<hr/>	8	32
Total wheat consumption	..	31	8	
<i>Maize</i> —				
In stock at the beginning of the year		20	0	
(a). Given to menials during the				
year	4	32		
(b). Stock in hand at the end of the				
year	Nil			
		<hr/>	4	32
Total maize consumption	..	15	8	
Total wheat and maize consumption during the year	..	46	16	

This agrees with the consumption of cereals calculated on the basis given on page 261.

Of sugar and *gur* his family consumed from $4\frac{2}{5}$ to $4\frac{4}{5}$ maunds, and on checking according to the table on page 262, the consumption of these comes to $4\frac{1}{2}$ maunds. The servant and dependent consumed two seers a month on the average.

Pulses, according to H. S.'s statement, are consumed to the extent of 4 to $4\frac{4}{5}$ maunds during the year, while on checking, the figure comes to $1\frac{5}{16}$. The difference is negligible. For the consumption of pulses we have not, however, included the extra figure for the amount given to dogs and sweeper as this is from the leavings.

For the provision of *ghi*, milk, etc., H. S. keeps a good cow and a buffalo as milch cattle.

(b) SMALL OWNERS AND WELL-TO-DO TENANTS

XVI. Small owners and well-to-do tenants eat meals thrice a day for about
 1. eight months in the year and twice a day for the remaining four winter months from *Maghar* to *Phagan* (the middle of November to the middle of March). In the four winter months maize *chapattis* are mostly eaten with *sag* (greens); *shalgam* (carrots) and radish are used occasionally. Pulse is seldom prepared. Generally the quantity of *sag* eaten is much more as it economises the consumption of cereals. In *Phagan* (the middle of February to the middle of March) carrots too are eaten green or cooked.

During the cane-pressing period these classes keep to cane-juice for the midday meal, with the addition of a single *chapatti* with *sag* and salt to taste. Evening meals consist of maize *dalia* (roughly-ground maize boiled in sweetened water). As these people do not employ *chamars* as *jhokas* for converting the juice into *gur* they have no deduction on this account; they prepare the maize *dalia* from *dhandoi* (the sweet wash of the pan) and from *marl* (the impurities skimmed off the boiling juice). A variation is sometimes followed in *dalia* being taken with a *chapatti* and a good quantity of *sag* or *sundh* (a salty preparation of dry ginger and water), this, however, is not common and when taken is meant to counter-act the continuous effects of juice and *sag* consumption. Male workers in this period sometimes eat a maize cob boiled in the juice pan, or roasted grain for the evening meal. In *Chet* (the middle of March to the middle of April) carrots are eaten green or cooked, supplemented by *satoo* (a preparation of roasted barley or wheat mixed with sweetened water) with the idea of reducing the pressure on wheat and *berra*, which become the chief food grains till the end of *Katak* (the middle of November).

During the month of *Jeth* (the middle of May to the middle of June) *piazi* seeds (a *rabi* weed) are collected and ground and mixed with wheat flour to prepare *chapattis* at meals. The quantity of *piazi* so eaten varies from 4 to 8 seers per head. In *Har* (the middle of June to the middle of July) melons, which are mostly home produced, are eaten irregularly, at, or apart from, meals. Food in these days is seldom cooked and, when it is, consists of vegetables and pulse combined; *ghia* (vegetable marrow) and *tinda* (a vegetable, *citrullus vulgaris*) when eaten are usually cooked with gram pulse. In *Asoj* (the middle of September to the middle of October) roasted maize cobs are consumed between meals. In *Katak* (the middle of October to the middle of November) *jowar* to the extent of 8 to 16 seers per family is mixed with wheat for the preparation of *chapattis*. During the eight months

Chet to Katak (the middle of March to the middle of November) early morning meal (*chhahwela*) is taken. At breakfast *chapattis* are salted and are eaten with *lassi* (butter-milk); sometimes *achchar* (pickles) and onions are also consumed at this meal. Children are also given curds. Pulse is also sometimes eaten with *chapattis*. In summer when three meals are taken *lassi* is not generally available for the evening meal, in winter whatever remains over from the day is consumed during the evening meal.

The principal use to which *ghi* is put by these people is for smearing *chapattis*, and only to a small extent for the preparation of *dal*. The milch animals kept are expected to pay their way and *ghi* is sold to recover the price of corn and oil-cakes given to the cattle. If no milch animal is kept, or if it has become dry, *ghi* is not purchased even for spreading on their *chapattis*, unless a guest is present, in which case *sawian* or rice is offered. At childbirth a woman will eat 4 to 6 seers of *ghi* in different forms. Milk is rarely, if ever, drunk by adults except during illness and is given to children only to pacify their wilfulness.

Gur is eaten by adults only after a hard day's work and the children may be given a few nibbles daily; it is also consumed as *sherbet* about once a week during the hot months. Meat is eaten once every one or two months; half a seer (16 ozs.) of meat cocked with chillies would be the ration of meat taken by a family of average size.

A table showing the average monthly consumption of cereals and pulses in the case of small owners and tenants is given below. During the cane pressing season the consumption of cereals decreases to about one-third of the quantity consumed at other times of the year, but the consumption of *gur* increases and the figures given for this may be safely doubled. During the reaping of the *rabi* harvest from 4·8 to 6·4 *chhatanks* a day (9·6 to 12·8 ozs.) are eaten by the reapers alone. At that time *ghi* is also consumed at the evening meal by the reapers to the extent of 2 seers (64 ozs.) a month for the adult males. If women are also employed in reaping the harvest they get the ordinary smear of *ghi* on their *chapattis*.

TABLE LXXXI.--Showing the Average Monthly Consumption of Gur, Cereals and Pulses by Small Owners and Well-to-do Tenants.

XVI.
1.

(a). Gur.

	Seers	Equivalent in ozs.
Below 5 years of age ..	$\frac{3}{4}$	24
Between 5 and 10 years of age ..	$1\frac{1}{4}$	40
" 10 " 15 " ..	$1\frac{1}{2}$	48
" 15 " 25 " ..	$1\frac{3}{4}$	56
" 25 " 55 " ..	2	64
" 25 " 55 " ..	$1\frac{1}{2}$	48
" 25 " 55 " ..	$1\frac{1}{2}$	48
Over 55 years of age ..	$1\frac{1}{2}$	48

(b). Cereals and Pulses,

Month	Below 5 years of age	5 to 10 years of age	10 to 15 years of age	15 to 24 years of age.	25 to 55 years of age.	Over 55 years of age.
	Seers.	Seers.	Seers.	Seers.	Seers.	Seers.
<i>Maghar, Poh, Magh, Phugun</i> (middle of December to middle of March)—						
Cereals	5.62 (180)	10.31 (330)	15.93 (510)	20.62 (660)	26.25 (840)	20.62 (660)
Pulses .. ..	.06 (2)	.12 (4)	.18 (6)	.25 (8)	.25 (8)	.25 (8)
<i>Chet</i> , (middle of March to middle of April)—						
Cereals			Same as above			
Pulses	4 (12)	.9 (28)	1.31 (42)	1.75 (56)	1.75 (56)	1.75 (56)
<i>Baisakh, Jeth</i> , (middle of April to middle of June)—						
Cereals			Same as above			
Pulses	9 (28)	1.75 (56)	2.62 (84)	3.5 (112)	3.5 (112)	3.5 (112)
<i>Har, Sawan, Bhadon</i> , (middle of June to middle of Septem- ber)—						
Cereals			Same as above			
Pulses .. ..	.2 (7)	.4 (12)	.6 (19)	.9 (28)	.9 (28)	.9 (28)
<i>Asoj</i> , (middle of September to middle of October)—						
Cereals			Same as above			
Pulses			Same as for <i>Baisakh</i> and <i>Jeth</i> .			
<i>Katak</i> , (middle of October to middle of November)—						
Cereals			Same as above			
Pulses .. ..	.6 (19)	1.3 (42)	1.96 (63)	2.62 (84)	2.62 (84)	2.62 (84)

NOTE.—Figures in brackets show equivalents in ounces, one seer=32 ounces.

Two families, one a small owner and the other of a well-to-do tenant, have been selected for examination to arrive at an estimate of consumption amongst this class of people.

1. The family of A. M., a small owner of 32 *kanals* (about 3 acres), consists of the following members :—

	Age Years.
1 male	30
1 female (wife)	25
1 child (daughter)	2½

The grain accounts of the family during the 12 months from *Maghar* 1924 (the middle of November to the middle of December), to *Katak* 1925 (the middle of October to the middle of November), both months inclusive, were as follows :—

<i>Wheat</i> —		Mds.	Srs.	Mds.	Srs.
In stock at the beginning of the year .. .. .	..	..	1	24	
Borrowed from a neighbour .. .. .	..	..	0	32	
Produce after repaying the borrowed maunds..	..	..	4	16	
Purchased Rs. 16/- worth of <i>berra</i> at 10 seers a rupee .. .. .	..	..	4	0	
			10	32	
Gram sieved out from the wheat and gram for use as pulse .. .. .	..	0	16		
In stock at the end of the year .. .. .	..	0	32	1	8
Total wheat consumption .. .. .	..		9	24	
<i>Maize</i> —					
In stock at the beginning of the year .. .. .	..	2	16		
Produce for the year .. .. .	..	1	0		
In stock at the end of the year .. .. .	..	..	
Total maize consumption .. .. .	..	..	3	16	
Barley consumed as <i>sattoo</i> in the month of <i>Chet</i> .. .. .	..	..	0	4	
<i>Jowar</i> consumed in <i>Katak</i> , 1925 .. .. .	..	..	0	4	
Total grain consumption during the year .. .. .	..	..	13	8	
Pulse and <i>barian</i> (a preparation from <i>mash</i>) .. .. .	..	0	26		
<i>Gur</i> .. .. .	..	1	8		

A. M. did not cultivate for eight months of the year as he was employed in the Railway Construction Department on Rs. 20/- per month. While absent from the village he took away from the stock mentioned above for his own use 16 seers of maize and 2 maunds of wheat; also 16

XVI. 1. seers of *gur*. His consumption in the village for four months and his wife's for 12 months was, therefore :—

	Mds.	Srs.
Wheat	7	24
Maize	3	0
Barley and <i>jowar</i>	0	8
<i>Total consumption of cereals</i> ..	10	32
Pulses	0	26
<i>Gur</i>	0	32

According to the table given on page 266, the consumption of cereals for one female for one year works out at 7 maunds 35 seers and for one male for four months at 2 maunds 25 seers, or a total of 10 maunds 20 seers. The consumption of pulses for the same periods is 18 seers 8 chhatanks for one female and 7 seers 14 chhatanks for one male, or a total of 26 seers 6 chhatanks. *Gur* for the same periods works out at 21 seers and 8 seers per female and male respectively—a total of 29 seers. In the case of cereals the actual consumption is 12 seers more than the calculated amount but contributions to charity and amounts spent on small purchases have not been taken into account. With regard to the consumption of pulses both sides balance, while in the case of *gur* the actual consumption is 3 seers more than the figure calculated. This may be due to the fact that no allowance has been made for the child, who at the beginning of the year was $1\frac{1}{2}$ years of age, when a child begins to like sweet things. Moreover, a cake or two of *gur* is sometimes given to the cattle and no account is ever kept of this.

In *Har* (June-July) the buffalo came into milk and *lassi* was drunk daily. Milk was consumed by the child each day and by the cultivator himself about twice a week. He also ate about a seer of *ghi* a month, but his wife's consumption was confined to that which was smeared on *chapattis*. No surplus *ghi* was sold, and the consumption of *ghi* and milk is affected by the fact that the family is small. In the absence of a male child the couple have little incentive to economy. As A M himself said "Why should I undergo trouble in the hope of accumulating?"

2. Of the well-to-do tenants, F.'s family has been selected for study. It consists of the following members :—

Males.		Age.	Females.		Age.
		Years			Years.
1 (himself)	..	45	1 (wife)	..	40
1 (son)	..	18	1 (daughter)	..	11
1 ..	..	11	..	..	..
1 ..	..	6			

The family actually consumed during the year the following cereals :— XVI.
1.

<i>Wheat</i> —	Mds.	Srs.
In stock at the beginning of the year	0	20
Reserve from <i>rabi</i> crop 1925 ..	12	0
Obtained in exchange for vegetables ..	2	32
Total wheat consumption ..	15	12

Maize—

Produce in stock at the beginning of the year ..	12	0
--	----	---

<i>Total wheat and maize consumption during the year ..</i>	27	12
---	-----------	-----------

Pulses	1	8
----------------	---	---

<i>Gur</i>	3	0
--------------------	---	---

According to the calculation table given, the family should have consumed 29 maunds 32 seers. This is greater than the actual by 2 maunds 20 seers due to the fact that F. plies his cart for hire between the village and Phagwara or Ludhiana, and when away often takes his meals outside. Moreover, when he was pressing the cane crop, the area of which was 2 *kansals* and which took 5 days to press, he and his family lived practically on *dhandoie dalia* of maize. He grew no barley but produced 24 seers of *jowar*, which was not eaten but saved as seed for the next crop. In the case of pulses and *gur* his family, according to the tables given, should consume 1 maund 29 seers and 2 maunds 16 seers, respectively. The calculated consumption of pulses exceeds the average by about 21 seers, while that of *gur* fall short by 24 seers. F. produces a considerable quantity of vegetables, some of which are sold in exchange for grain, and some are eaten at home, thus supplementing the consumption of pulses. In the case of *gur*, F., quoting from memory, stated that 16 seers were given to his cattle, 4 seers were utilized in sweetening boiled rice which was distributed to *faqirs*, etc., and he had 4 seers surplus. For the last 7 months he has had a cow which is now on the verge of going dry. During the harvesting of *rabi* crops for 12 days he and his son consumed about 2 seers of *ghi*; his wife also worked with them but she took only *ghi*-smeared *chapattis*.

(c). SMALL TENANTS AND AGRICULTURAL LABOURERS.

Small tenants and agricultural labourers, viz, *lohars*, *tarkhans* and *chamars*, take two meals a day in the four winter months, from *Maghar* to *Phagan* (the middle of November to the middle of March), and three meals a day in the other eight months, from *Chet* to *Katak* (the middle of March to the middle of November). The difference in the standards of consumption

- XVI. between small and well-to-do tenants and small owners is negligible ; the
 1. kind of food taken at different meals is practically the same.

Lohars and *tarkhans* do not differ in their social status ; the profession they follow makes the distinction between them, but marriages between them are quite common. They do not entirely depend on agricultural labour. Only one member of the family, and generally the head, does *sepi* in the village. He may be assisted by one or more of his sons who are still too young to take up the family profession. As they grow older the younger members generally leave for work in big cities such as Simla, Delhi and Lahore, where they are soon able to earn at least Rs 2/- a day. The broadening effect of travel and the fact that this class often has income from outside and from sources other than agriculture, tends to raise the standard of consumption. Each family usually keeps a cow buffalo, and except at the evening meal *lassi* is taken at all meals throughout the year and curd about three times a week. *Ghi* is used on *chapattis* and also eaten in food daily. There is no question here of all the *ghi* being sold ; the surplus is sold off to recoup part of the expenditure incurred in feeding the cattle on corn, oil-cakes, etc. In the absence of a milch animal, or when it becomes dry, *ghi* in reduced quantities is purchased for consumption but *lassi* and curd disappear from the menu. Wheat *chapattis* are eaten at all meals for the eight months from *Chet* to *Katak*. In this period, particularly in *Katak*, *chapattis* made of mixed *jowar* and wheat are eaten. The quantity of *jowar* so eaten is from 8 to 12 seers per family, and is dependent on some of the crop sown by them as tenants for fodder for the cattle being allowed to reach maturity ; it is never purchased for home consumption. Only one variety of dish is prepared for each meal ; it may be either vegetables or pulses, but is more commonly the latter. Salt *chapattis* taken with *lassi* and sometimes also with curd or *gur* are eaten for breakfast. *Gur* mixed with *ghi* is taken on the average about thrice in a fortnight. It is also consumed in *sherbet* or *sardae* in the other months. In the four winter months the evening meal consists of maize *chapattis*, which are eaten with *sag* (greens) about four times a week and with pulses on the remaining three days. *Sag*, vegetables and more often pulses are eaten at the midday meal in the winter.

For about two or three weeks in winter a drink of cane-juice daily and juice *kheer* is taken at least twice from the owners for whom they work. Milk is drunk alone or in tea when the cow or the buffalo is in milk and for the greater part of the year its consumption is as follows:—
 $\frac{1}{2}$ seer (16 ozs.) per adult male ; $\frac{3}{4}$ seer (12 ozs.) per adult female

about thrice a week and daily per male child between 10 and 15 years of age; and $\frac{1}{4}$ seer (8 ozs.) per girl between 10 and 15 years of age and per boy between 5 and 10 years of age.

The average monthly consumption of *ghi* per adult male is $1\frac{1}{4}$ seers (40 ozs.), per aged male and per female or male child between 10 and 15 years of age 1 seer (32 ozs.), per male child of between 5 and 10 years of age $\frac{3}{4}$ seer (24 ozs.), and half a seer (16 ozs.) per female child of between 5 and 10 years of age. Children of both sexes under 10 years of age eat about $\frac{1}{4}$ seer (8 ozs.) per day. On the birth of a child a woman eats from 7 to 8 seers of *ghi* in different forms

White sugar is seldom used, and then only in entertaining a guest. Mangoes and melons are eaten for about three weeks in the year when in season for breakfast or as part of other meals. *Kheer*, *halwa* and meat are eaten only on special occasion such as entertaining visitors.

The consumption of cereals in the case of the skilled agricultural workers, *lohars* and *tarkhans*, is similar to that of the classes previously mentioned. Making allowance for the period in which *sag* and vegetables are largely consumed, pulses are eaten by this class for about 8½ months in the year. Their monthly consumption of pulses for males and females is as follows :—

TABLE LXXXII.—*Showing the Average Monthly Consumption of Pulses, Gur and Ghr by the Artisan Classes*

(a). *Pulses.*

	Seers.	Equivalent in ozs.
Below 5 years of age	0·7	21 1
Between 5 and 10 years of age	1 3	41·6
„ 10 „ 15 „ .. .	2·0	64·0
Over 15 years of age	2·6	83·2

(b). Gur.

			Seers.	Equivalent in ozs.
Below 5 years of age	..	..	$\frac{3}{4}$	24
Between 5 and 10 years of age	..	..	1	32
„ 10 „ 15	..	..	$1\frac{1}{2}$	48
Over 15 years of age	..	{ Males ..	2	64
		{ Females	$1\frac{1}{2}$	48

(c). *Ghi*.XVI.
1.

	MALES.		FEMALES.	
	Seers.	Equivalent in ozs.	Seers.	Equivalent in ozs.
Below 5 years of age	$\frac{1}{4}$	8	$\frac{1}{4}$	8
Between 5 and 10 years of age	$\frac{3}{4}$	24	$\frac{1}{2}$	16
„ 10 „ 15 „	1	32	1	32
„ 15 „ 55 „	$1\frac{1}{4}$	40	1	32
Over 55 years of age	1	32	1	32

NOTE — *Ghi* consumed at childbirth by women is not included in these figures

1. The family of J., a small tenant, was specially noticed; its members are —

Males.	Age.	Females.	Age.
	Years.		Years.
1 (himself)	40	1 (his wife)	40
		1 (daughter) ..	8
..	..	1 „ ..	6
..	..	1 „ ..	3

The grain accounts of the family for the 12 months from *Maghar* 1924 to *Katak* 1925, are as follows:—

Wheat —

	Mds.	Srs.	Mds.	Srs.
In stock at the beginning of the year ..	0	32		
<i>Berra</i> reserved for consumption in <i>rabi</i> 1925	21	24		
			22	16
Given to <i>kamins</i>	2	8		
Gram sieved out for feeding cattle and for use as pulse	2	32		
stock at the end of the year ..	3	24		
			8	24
Total wheat consumption ..			13	32

Maize—

			Mds.	Srs.	Mds.	Srs.	XVI. 1.
Produce of <i>kharif</i> 1924	..	..	..	16	0		
Sold and given to <i>kamins</i>	..	..	6	10			
Used as seed	..	..	0	16			
					6	26	
Total maize consumption				..	9	14	
Total wheat and maize consumption during the year				..	23	6	

Barley and *jowar* were not consumed by the family, as owing to the failure of the crop no grain was harvested

Pulses—Consumption for the year 1 20

Gur—Consumption for the year 2 0

Using the figures given in the table on page 266 a family of this size should have consumed during the year 23 maunds 10 seers of cereals: the actual consumption is practically identical. The calculated consumption of pulses from the table on page 273 is 1 maund 20 seers and the actual is the same. For *gur* the calculated consumption is 2 maunds 1 seer, while the actual was 2 maunds.

J's family drink *lassi*, but use *ghi* only for smearing *chapattis*. The cow buffalo has been in milk for the last five months, and during that time J. sold *ghi* to the value of Rs 42/-. He reaped his last *rabi* harvest without consuming any *ghi* other than that taken on *chapattis*

2. The family of B S, a *lohar*, has been selected for detailed examination. The members consist of four males, ages 45, 35, 16 and 6 years, and two females, ages 42 and 30 years, respectively.

The grain accounts of this family for the 12 months from *Maghar* 1924 to *Katak* 1925 (both months inclusive) are as follows:—

Wheat—

			Mds.	Srs.	Mds.	Srs.
In stock at the beginning of the year	..	3	24			
Received in <i>rabi</i> 1925	..	..	13	24		
Purchased	..	..	..	14	16	
					31	24
In stock at the end of the year	..				4	32
Total wheat consumption					26	32

XVI
2.

<i>Maize—</i>		Mds.	Srs.	Mds.	Srs.
Received from owners (all consumed)	..	..	13	24	
<i>Jowar—</i>					
Consumed in <i>Katak</i> 1925	.. ..	..	0	8	
<i>Total grain consumption during the year</i>				40	24
Pulses consumed, including <i>barian</i> (a preparation from mash)	..	.	4	16	
<i>Gur Shakkar—</i>					
In stock at the beginning of year	..	0	32		
Received from owners	.. ..	4	0		
					32
In stock at the end of the year	..	.	1	20	
<i>Total gur shakkar consumption</i>				3	12

According to the table on page 266, a family of this size should have consumed 40 maunds 31 seers of cereals, which figure corresponds closely with the actual figures of consumption given above, viz., 40 maunds 24 seers. In the case of *gur* the calculated consumption corresponds exactly with the actual shown on page 273. In pulses the calculated consumption works out at 4 maunds 15 seers and the actual, as shown above, is only 1 seer more.

B. S. keeps a milch buffalo, and the family consumes *ghi* and milk in the quantities mentioned above. Meat is eaten only by the male members of the family, and that occasionally.

The standard of consumption of the *chamars* is also similar to that of small tenants, but with this difference that in the consumption of cereals in *Katak* (the middle of October to the middle of November) the quantity of *jowar* mixed with wheat for the preparation of *chapattis* depends upon the amount of *jowar* earned by their womenfolk, who act as pluckers and are paid at the rate of $\frac{1}{3}$ rd to $\frac{1}{4}$ th of the *jowar* stalks plucked. The amount of *jowar* so earned and consumed varies in the case of each family from $\frac{1}{2}$ to $1\frac{1}{2}$ maunds.

In winter during the cane pressing period a *chamar* serves as a *dhoka* and is fed by the cultivator. He also receives as his customary right *dhandoie* and *mail* from which his family cooks maize *dalia*, as was done

also by small owners and tenants. During the four winter months *sag* is the only dish cooked and maize the chief grain consumed. About fifteen meals in this period consist of plain *chapattis* with salt. Pulse is rarely cooked during this time. From *Chet* to *Har* (the middle of April to the middle of July) the ground seed of *piazi* weed is mixed with *berra* (wheat and gram) for the preparation of *chapattis*. After the *rabi* harvest the stalks gleaned by the womenfolk usually contain wheat, gram and *piazi* seeds. These are not separated and sold, but are threshed together along with the sheaves earned by the *chamar* as *lava* or reaper, and the sweepings of the threshing flour, which are his by custom, and the mixed grain is ground and used for making *chapattis*. The amount of *piazi* flour eaten varies from 6 to 12 seers per family. During the remaining eight months wheat is the chief grain consumed.

XVI.
2.

The *chamars* seldom have any dish at breakfast as is the case with the classes mentioned previously; the loaves they eat are salty. Vegetables are used at other meals only when they are selling very cheap or when the *chamar* receives them from the owner for whom he works. Melons are also sometimes eaten under the same circumstances.

Milch cattle, whether cows or buffaloes, are never kept with a view to the consumption of their milk and *ghi*, but are purchased with the idea of making a profit in the next lactation and for this purpose they are either purchased or had on *adhiara*.* It is the aim of the *chamar* to have these milch animals fat and healthy looking when they come into milk again and this largely depends on good feeding. To recoup himself for the expenditure involved in feeding them the *chamar* generally converts such milk as the animals are still giving into *ghi* for sale. *Lassi*, therefore, is the only milk product available to a *chamar* family and even this is not usually had for more than three months, for the animals stop yielding milk altogether two or three months before the time of the next lactation. *Chapattis* are, therefore, eaten dry and are only occasionally smeared with *ghi*. Guests are, however, entertained with *ghi*-smeared *chapattis* and sugar or sweet *sawian*. Milk is sometimes drunk with tea in the cold months, but generally with the idea of getting rid of a bad cold. *Gur* is eaten by males after a hard day's work and small quantities are given to soothe the sweet taste of the children; it is also consumed in *sherbet* about twice in three weeks during

**Adh*=half. It is a common practice, if milch cattle are on the verge of going dry, to hand them over to a *chamar* on the condition that when they come into milk again, either party may buy at half the price, or, if the animal is sold, the money will be divided equally

XVI. the summer *Sheera* or syrup (a by-product of *khanchi* or white sugar) is used by *chamars* to prepare sweet rice, but only on wet days.

Goats' meat is eaten about once in two months and the *chamars* also eat the flesh of the dead animals of the village, but the younger members of the caste are giving up this practice. Some also use the fat of the dead animals for frying purposes but again only about once in two months.

The following statements show the average monthly consumption of *gur*, cereal and pulses in the case of *chamars*. It should be noted that their consumption of *gur* varies somewhat from month to month for various reasons, but the figures give a general average.

TABLE LXXXIII—*Showing the Average Monthly Consumption of Gur, Cereals and Pulses by Chamars.*

(a). *Gur.*

	MALES.		FEMALES.	
	Seers.	Equivalent in ozs	Seers.	Equivalent in ozs.
Below 5 years of age ..	$\frac{3}{4}$	24	$\frac{3}{4}$	24
Between 5 and 10 years ..	$1\frac{1}{4}$	40	$1\frac{1}{4}$	40
" 10 " 15 " ..	$1\frac{1}{2}$	48	$1\frac{1}{4}$	40
" 15 " 25 " ..	$1\frac{3}{4}$	56	$1\frac{3}{4}$	56
" 25 " 55 " ..	$1\frac{3}{4}$	56	$1\frac{1}{4}$	40
Over 55 years of age ..	$1\frac{1}{2}$	48	1	32

(b). *Cereals and Pulses.*

Month	Below 5 years of age.	5 to 10 years of age.	10 to 15 years of age	15 to 25 years of age.	25 to 55 years of age.	Over 55 years of age.
	Seers	Seers.	Seers	Seers.	Seers.	Seers.
<i>Maghar, Poh, Magh, Phagan,</i> (middle of November to middle of March)—						
Cereals . . .	5.62 (180)	10.31 (330)	15.93 (510)	20.62 (660)	26.25 (840)	20.62 (660)
Pulses .. ..	.06 (2)	.12 (4)	.18 (6)	.25 (8)	.25 (8)	.25 (8)
<i>Chet, Baisakh, Jeth, Har, Sawan, Bhadon, Asoj, Katak,</i> (middle of March to middle of November—						
Cereals			Same as above.			
Pulses .. ..	.9 (28)	1.75 (56)	2.62 (84)	3.5 (112)	3.5 (112)	3.5 (112)

Note.—Figures in brackets show equivalents in ounces; one seer=32 ounces.

The family of H., a *chamar*, has been studied in detail and consists of— XVI.
2.

Males.		Age.	Females.		Age.
		Years.			Years.
1 (himself)	..	60	1 (his son's wife)	.	40
1 (son)	..	40	1 (grand-daughter)	..	18
1 (grandson)	..	12	1	„	9
1	„	3	..		..

The grain accounts of the family for the 12 months from the beginning of *Maghar* 1924 to the end of *Katak* 1925, are given below. There was no stock left at the end of the year :—

		Mds.	Srs.	Mds.	Srs.
<i>Wheat—</i>					
In stock at the beginning of the year	..	1	16		
Received from owners in <i>rabi</i> 1925	..	8	0		
Purchased Rs. 10/- worth, at $7\frac{1}{5}$ seers a rupee		1	32		
Purchased Rs. 20/- worth, at 8 seers a rupee		4	0		
Earnings of <i>berra</i> as reaper	..	1	24		
Wheat, gram and <i>piazi</i> gleaned	..	2	32		
				19	24
<i>Maize—</i>					
Earned during <i>kharif</i> 1924	..	5	8		
Purchased at 12 seers a rupee	..	4	32		
				10	0
<i>Jowar—</i> Earning of womenfolk in <i>Katak</i> 1925	..	1	16	1	16
<i>Total grain consumption during the year</i>	..			31	0
<i>Pulses—</i>					
In stock at the beginning of the year	..	1	0		
Purchased in <i>Sawan</i> (July-August)	..	1	0		
„ „ <i>Jeth</i> (May-June) ..	..	1	24		
<i>Total pulse consumption during the year</i>	..			3	24

When the *chamar* is working for his cultivator, he is given food on each working day and this modifies the budget. From the detailed

- XVI. statement given in the footnote* it will be seen that the man of 40 years
 2. of age was fed by the cultivator for 138 days, 30 in the maize-consuming and 108 in the wheat-consuming period. The man of 60 years of age was fed by the cultivator for 40 days, all in the maize-consuming period. The woman of 40 years was fed at the expenses of the cultivator for 10 days in the wheat-consuming period and the girl of 18 years fed at the expense of the cultivator for 10 days and also for another 20 days

*The following table shows the number of days spent by the different family members of H., a *chamar* away from home

Kind of work done.	Number of days.	Month.
MAIZE CONSUMING PERIOD.		
1. Himself, aged 60 years— <i>Jhoka</i> (furnace feeder) during cane pressing period	40	<i>Poh-Magh</i> (Dec.-Feb.)
2. His son, aged 40 years— Watering preparatory to sowing wheat	15	<i>Maghar</i> (Nov. Dec)
Watering wheat crop	10	<i>Poh</i> (Dec.-Jan)
Odd jobs	5	<i>Phagan</i> (Feb.-Mar.)
<i>Total</i> ..	30	
WHEAT CONSUMING PERIOD.		
Watering and sowing of sugarcane	11	<i>Chet</i> (March-April)
Hoeing and weeding „ „	14	<i>Barsakh</i> (April-May)
Winnowing of <i>rahi</i> harvest	18	<i>Jeth</i> (May-June)
Weeding of melons	1	<i>Har</i> (June-July)
Carrying of manure to fields	12	<i>Sawan</i> (July-August)
Making beds on maize fields	1	„
Weeding maize crop	20	<i>Bhadon</i> (Aug.-Sep.)
Watering „ „	11	<i>Asoj</i> (Sep.-Oct.)
Odd jobs	7	„ „
Sowing <i>senji metha</i>	5	„ „
Reaping <i>chari</i> crop	8	„ „
<i>Total</i> ..	108	
3. His son's wife, aged 40 years— Repairing houses	10	<i>Asoj</i> (Sep.-Oct.)
4. His grand daughter, aged 18 years— Repairing houses	10	„ „
Visit to her husband's relatives	20	„ „
<i>Total</i> ..	30	

she was absent from the home, when she paid a visit to a relative of ^{XVI.}
her husband's _{2.}

Taking now the case of maize, we find that during the cane pressing period of 40 days, the maize taken by the family was reduced to about one-third of the usual amount, because they lived largely on *dalia* prepared with cane juice. During this period also H was absent throughout from the family meals, while his son was absent for about 30 days. Taking all this into account we get, according to the table on page 278, a consumption of maize amounting to 8 maunds 35 seers. Similarly taking the wheat-consuming period, we find the son was absent for 108 days, his wife for 10 days and his daughter for 30 days; making allowance for this we get the quantity of grain consumed as 22 maunds 1 seer. Thus the total amount of cereals consumed during the year comes to 30 maunds 36 seers, which almost balances with the grain account given above

As regards the pulses the absences during the maize-consuming period are not of any account as during these days *sag* takes their place in the menu. Making allowance for the absences in the other months we get a total of 3 maunds 22 seers, which is only a couple of seers less than what is shown in the grain account.

Gur actually consumed during the year was 2 maunds 16 seers, while, according to the calculation table, it should come to about a seer less than this amount and the figure may, therefore, be taken as reliable.

H. has a milch buffalo which yields three seers of milk daily. No milk is drunk by any of the family, nor is *ghr* taken, except when an important guest or relative is present, when a smear is given to *chapattis*. Only *lassi* is drunk freely.

(e) WELL-TO-DO NON-AGRICULTURISTS.

Well-to-do non-agriculturists (*Banias*, *Khatri*s, Brahmins, etc.) take only two meals a day throughout the year, *chhahwela* (breakfast) with them is never cooked. For about a month during the cold weather they may take in the early morning a *laddu* or two (sweets), or a *chhatank* (2 ozs.) of *shirini* (another variety of sweets), or a *pinni* (a mixed confection), and this is washed down with some *lassi* or water. The sweets are either prepared at home or received from relatives as customary offerings. For

- xvi. about a month in the year mangoes and melons, when in season and low in price, are often consumed at breakfast or other meals. As in the case of the other classes, roasted grain is eaten in the afternoon throughout the year.

In the four winter months maize *chapattis* smeared with *ghi* are often eaten at both meals, except when a guest is on a visit or some member of the family is ill, when wheat *chapattis* are prepared. For the remaining eight months of the year, wheat is the staple cereal consumed. As a rule only one dish of pulse or vegetables prepared with *ghi* is served, but if a guest is present two dishes are served. When a milch animal is in milk, curds are consumed at the first meal of the day. *Sag* is eaten at the evening meal in the winter on an average about twice a week. *Halwa*, or sweet rice, or *kheer* is eaten from one to three times a month in the ordinary course, and more often if social or religious functions intervene. *Shakkar* (brown sugar) mixed with *ghi* is consumed at one or other of the meals about once a week on the average, and if a guest is present he will be served with white sugar. During the hot weather, sugar is eaten either mixed with water or as *sardaie*, a preparation made with sugar and melon seeds or almonds, which is said to produce a cooling effect. *Achchar* is frequently taken at meals by this class. *Papar* (a wafer prepared from flour and spices) is eaten only occasionally and as a delicacy, but is commonly served when a guest is being entertained.

Lassi with this class, as with the others, is rarely drunk at the evening meal. Non-agriculturists, and in particular those who are non-owners, keep fewer milch cattle than well-to-do agriculturists. As explained earlier, it is a common practice with them to hand over their milch cattle, when on the verge of becoming dry, to the *chamar* on the understanding that they can buy them back for half the price when they have again come into milk. There are some well-to-do non-agriculturist families who keep no milch cattle at all and who consume *lassi* and other milk products only occasionally, as when they receive a surplus gratis from a neighbour. Where a milch animal is kept by a non-agriculturist family, the quantity of milk drunk by males and females of different ages is similar to that shown in the case of well-to-do agriculturist families. When no milch cattle are kept or when they become dry, milk is rarely purchased, unless say some member of the family is sick, or the health of a male child seems to demand it. At the time of pregnancy a woman of this class will consume from 8 to 10 seers of *ghi* in different forms in about $2\frac{1}{2}$ months.

Well-to-do non-agriculturists consume wheat for eight months and maize for four months, and their average consumption may be taken to be the same as that of well-to-do land-owners xvi.
2.

Making allowance for the period in which vegetables are commonly eaten, pulses are taken for about eight months in the year. The average monthly consumption of pulses, *gur* and *ghi* is shown below.

TABLE LXXXIV.—*Showing Average Monthly Consumption of Pulses, Gur and Ghi by Well-to-do Non-Agriculturists of both Sexes.*

(a). *Pulses.*

	Seers.	Equivalent in ozs.
*Below 5 years of age	1½	40
*Between 5 and 10 years of age	1¾	60
„ 10 „ 15 „	1¾	60
Over 15 years of age	2½	80

* Children of this class eat *dal* and *achchar* more often, unlike those of agriculturists, who prefer *gur*.

(b). *Gur, Shakkar and Sugar.*

	Seers.	Equivalent in ozs.
Below 5 years of age	½	16
Between 5 and 10 years of age	1	32
„ 10 „ 15 „	1½	48
Over 15 years of age	1¾	56

(c). *Ghi.*XVI.
2.

	MALES		FEMALES.	
	Seers.	Equivalent in ozs.	Seers.	Equivalent in ozs.
Below 5 years of age ..	$\frac{3}{8}$	12	$\frac{1}{4}$	8
Between 5 and 10 years of age	$\frac{1}{2}$	16	$\frac{1}{8}$	12
„ 10 „ 15 „	1	32	$\frac{3}{4}$	24
„ 15 „ 25 „	$1\frac{1}{2}$	40	$1\frac{1}{4}$	40
„ 25 „ 55 „	$1\frac{1}{4}$	40	1	32
Over 55 years of age ..	1	32	1	32

As an example of this class the family of J D, *Bania (Aggarwal)*, has been selected for detailed examination. The family consists of the following members:—

Males.	Age.	Females.	Age.
	Years.		Years.
1 (himself) ..	60	1 (his wife) ..	45
1 (son) ..	35	1 (son's wife) ..	30
1 (grand-son) ..	16	1 (grand-child)	3
1 „ ..	13	1 „ .	$1\frac{1}{2}$
1 „ ..	9	.	..
1 „ .	6	..	..

J. D keeps a shop where pulses, sugar, soap and other *pansari* goods (groceries) are sold, both in exchange for grains and for cash. The grain obtained on exchange varies in quantity from day to day and most of it is used for domestic consumption. It is thus difficult to present a grain account for this family as has been done for the others and the investigator has had to rely on J. D's memory. When questioned he quoted 32 maunds of wheat and 16 maunds of maize as the figures for the consumption of cereals by his family, *i.e.*, a total of 48 maunds. If the consumption is calculated for this family from the table previously given on page 266 it works out at 48 maunds 26 seers.

His family actually consumed during the year 5 maunds 32 seers of pulse and the consumption according to the table works out at the same figures. XVI. 2.

In the case of *gur*, *shakkar* and sugar, the family actually consumed 3 maunds of *gur* and *shakkar* and 32 seers of sugar, a total of 3 maunds 32 seers. Their calculated consumption according to the table on page 281 is 3 maunds 33 seers.

J. D. keeps no milch cattle. He spends about Rs. 13/- to Rs. 14/- per month on *ghr*, which, at the current rate in the village, works out to a monthly consumption of 7·7 seers. The calculated monthly consumption of *ghr* for a family of this size, (excluding the year old child), is 7·75 seers.

(d). VILLAGE MENIALS.

The village menials like the *jhiwar*, *chhumba* and *ghumar*, take three meals a day for the eight months from *Chet* to *Katak* (the middle of March to the middle of November), and two meals a day during the four cold weather months from *Maghar* to *Phagan* (the middle of November to the middle of March). These classes do not ordinarily keep milch cattle. The first meal of the day usually consists of *chapattis* prepared with a little salt, and these are washed down with *lassi* when it can be got from the owners for whom they work. During the four winter months, *chapattis* are prepared from maize, and during the other eight months from wheat. *Satoos* of *jowar* and barley are sometimes substituted for wheat, if these grains can be got in one way or another from the owners. They are never purchased by the menials, but the *jhiwars* may get them as remuneration for the roasting of grains, and the *ghumars* in exchange for pots. As a rule *ghi* is purchased, but its use is confined to smearing *chapattis* for the male members of the family; more often than not, the females of the family eat their *chapattis* without *ghi*. Pulses or vegetables are prepared only about thrice a week; the pulse prepared by the menials is generally thin and consists largely of water; the consumption of pulse per head by this class is consequently less than in the case of the other classes. *Sag* is taken about twice a week during the four winter months with the evening meal. About 30 evening meals in the year are taken without any dish and *achchar*, green onions, ground salt, chillies or *gur* may be used as a substitute. *Gur* is also consumed as *sherbet*, but only on very hot days, when it is used to counter-act the effect of the heat. *Sawran*, rice and meat are cooked only on very rare occasions. For about two months, melons and mangoes are eaten about thrice a week, and when taken by this

- xvi. class they are usually eaten at meals as a substitute for *dal*. When a guest is being entertained he will be offered *ghr* and *skakkar* mixed.

Milk is rarely drunk, even if a milch animal is kept and is in milk, but *ghi* is prepared and sold. If a male member of the family is in ill health he may eat two or three seers of *ghr* as a restorative during convalescence, or milk worth Rs. 2/- or Rs. 3/- may be taken as a substitute. A woman of this class at childbirth consumes some three to five seers of *ghi*. The consumption of cereals by the menial classes is practically the same as that of the others in the village

Making allowance for the days on which vegetables and *sag* are consumed and for those on which *achchar*, ground salt, chillies, melons, and mangoes are taken as a substitute for a dish, pulse may be said to be eaten for eight months in the year. The average consumption per month of pulses and gur is shown below :—

TABLE LXXXV.—*Showing Average Monthly Consumption of Pulse and Gur by the Menial Classes of both Sexes.*

(a). *Pulses.*

	Seers.	Equivalent in ozs
Below 5 years of age	$\frac{5}{8}$	20
Between 5 and 10 years of age	$\frac{15}{16}$	30
„ 10 „ 15 „	$1\frac{9}{16}$	50
Over 15 years of age	$1\frac{7}{8}$	60

(b). *Gur.*

	MALES.		FEMALES.	
	Seers.	Equivalent in ozs.	Seers.	Equivalent in ozs.
Below 5 years of age ..	$\frac{1}{2}$	16	$\frac{1}{2}$	16
Between 5 and 10 years of age	1	32	$\frac{3}{4}$	24
„ 10 „ 15 „ ..	$1\frac{1}{4}$	40	1	32
„ 15 „ 25 „ ..	$1\frac{1}{2}$	48	$1\frac{1}{4}$	40
„ 25 „ 55 „ „	$1\frac{1}{4}$	40	1	32
Over 55 years of age .	1	32	1	32

It has already been noted that the consumption of *ghr* by this class is confined to that which is smeared on *chapattis*, which are for the most part eaten by the males. It is somewhat difficult to estimate the quantity

of *ghi* consumed in this way, for the coating may be generous or very thin. It may be estimated, however, that the *ghi* rubbed on *chapatti* leads to a monthly consumption of $\frac{2}{5}$ ths to $\frac{3}{5}$ ths of a seer (12·8 to 18·6 ozs.) in the case of males over 15 years of age, $\frac{1}{5}$ th to $\frac{2}{5}$ ths of a seer (8 to 12·8 ozs.) for males from 10 to 15 years of age, and $\frac{1}{5}$ th to $\frac{1}{4}$ th of a seer (4 to 8 ozs.) for persons from 5 to 10 years of age. XVI
2.

1. The family of B, *ghuwar* (water-carrier), has been selected for examination. It consists of the man 60 years of age and his wife 54 years.

B has a grain roasting hearth to which people come to have their grain roasted in the afternoon, for which he receives from two to four seers of roasted grain per day, except on rainy and busy days when the hearth is not worked. No record is kept of the weight of grain obtained in this way and the investigator, therefore, had to rely on B's memory. He stated that his family consumed during the year 8 maunds 32 seers of wheat, 5 maunds 8 seers of maize and 8 seers of jowar, giving a total of 14 maunds 8 seers of cereals. His calculated consumption according to the table given on page 276, would work out at 14 maunds 2 seers.

The family actually consumed 1 maund 6 seers of pulse during the 12 months from *Maghar* 1924 to *Katak* 1925, which is only a very little more than the calculated consumption according to the table. The family consumed 24 seers of *gur shakkar* during the year; this is identical with the calculated consumption according to the table.

B. has no milch cattle. He brings *lassi* to drink daily from the owners for whom he works, and also, sometimes curd which he takes with his morning *chapattis*. His consumption of *ghi* is confined to what is smeared on *chapattis*, and spending as he does some Rs. 2/- a month on this item, his monthly consumption at current rates amounts to 1·1 seers (35·2 ozs.)

2. The second menial family which has been selected for detailed examination is that of N., *ghumar* (potter). The members are as follows:—

Males.	Age.	Females.	Age.
	Years.		Years.
1 (himself) ..	40	1 (his wife) ..	40
1 (son) ..	20	1 (daughter) ..	17
..	..	1 „ ..	7

XVI. The grain accounts of the family are as follows :—

		Mds.	Srs.	Mds.	Srs.
Wheat in stock at the beginning of the year	..	2	32		
<i>Berra</i> purchased during the year	..	15	0		
Wheat, gram, barley (mixed) obtained in exchange for pots	.. ..	4	0		
Maize purchased in winter	..	10	0		
Maize obtained in exchange for pots	..	2	0		
Jowar	..	0	8		
				34	0
<i>Berra</i> in stock at the end of the year	..			2	32
<i>Total grain consumption during the year</i>	..			31	8

This figure practically agrees with the consumption of cereals for a family of this size according to the table on page 276

The actual consumption of pulses during the year was $2\frac{1}{2}$ maunds, which is only a very little less than the figures obtained by calculation from the table. No reliable figures could be obtained for the consumption of *gur shakkir* owing to the fact that it had been purchased in small amounts from the shops as occasion demanded, and no record for these purchases had been kept.

No milch cattle were kept. *Lassi* was brought from the homes of such owners as could spare it and was drunk generally at breakfast during the eight summer months and at the first meal of the day in the four winter months.

Ghi was purchased for domestic consumption, but its use confined to the smearing of *chapattis*. Even this does not amount to much as the *chapattis* of the males got very little and those of the females still less. The consumption of the family on the average amounted to $1\frac{1}{2}$ seers (48 ozs.) per month.

XVI. 4. Among Hindus, no Brahman or *Khatri* was observed to eat meat. Two *baniyas*, however, took meat about three times a month although they did not eat beef. *Sunars* eat meat regularly twice a week with the idea of counter-acting the injurious effects of fire on their eyes. *Araims* and *Jats* take meat from once in two months to three times a month according to circumstances. Except when the flesh of the dead animals of the village is available, *chamars* and

bhangis eat meat only about four times a year. The consumption of meat by *kamins* varies from about once in two months to twice a month. XVI.
4

Goats' flesh is the meat mostly eaten by the village population. Fowls are eaten by the well-to-do people; others also keep them, but with a view to the sale of eggs and chickens. The Mohammedans occasionally eat beef, and the Hindu meat-eating people sometime retaliate by eating pork, which they bring from Phillour and Ludhiana. Fish is also eaten though not commonly. Hares are hunted and eaten by *Jhwaris* and Sikhs; during the year 24 were caught and eaten. Quails are also snared by some of the non-agriculturist Mohammedans, but when caught they are mostly sold outside the village.

An attempt is now made to estimate the meat consumption of the village for the year. F, *kassab* (butcher) here, kills on the average one goat a week. Two other *kassabs* of Phillour visit the village four times a week and sell each week about 24 seers of goat flesh, i.e., the equivalent of about 2 goats. This gives three goats a week as eaten in the village, excluding those consumed on the occasion of the two '*Ids*' (Mohammedan festivals). When the investigator was in the village 10 goats were eaten at *Bakr 'Id* and 15 on '*Id-ul-Fitr*'. The total number of goats eaten in the year, therefore, is about 181. The yield of flesh from a goat varies from 10 to 14 seers, and 12 seers may be taken as the average and, therefore, the quantity of goats' meat eaten during the year may be estimated at about 2,172 seers.

The amount of flesh in a cock or hen varies from 1 to $1\frac{1}{2}$ seers, and $1\frac{1}{2}$ seers may be taken as the average; as some 20 fowls are consumed during the year, this gives about 25 seers of meat. The amount of flesh on a hare is about the same as that on a cock or a hen. 24 hares were eaten during the year giving a meat yield of 30 seers. The amount of other meats eaten in the year, e. g., beef and pork, and including fish, will not exceed 40 seers.

Thus the total meat consumption of the village for the year may be estimated at about 2,267 seers or 56 maunds 27 seers.

5. The milk producing stock of the village in the second week of June 1925 amounted to—(a). 155 cows, of which 21 were dry, (b). 183 buffaloes, of which 47 were dry, and (c). 146 goats, of which 12 were dry. One *gujar* goat-keeper supplies 20 seers of milk daily at Phillour; except for this, all the milk is consumed in the village. No milk is imported. XVI.
5.

- XVI. 5. though a small amount is sold to the villagers by cattle traders, who occasionally pass through the village to some cattle market, such as, Ludhiana, Phagwara, Phillour, or Jullundur.

Milk as such is not drunk to any great extent in the village, but is taken mostly in the form of *ghi* and *lassi*. Only well-to-do families drink milk either alone or in tea, and what is not consumed is set aside each night to be converted into *lassi*, curd or *ghi*. Cows' and buffaloes' milk is bought and sold only to a very small extent in the village. Even well-to-do families do without milk if they have no milch cattle. The poorer classes are prevented from selling it, partly because of the fact that there is no continuous demand for milk, and partly because its disposal would mean that they would have to do without *lassi* and curd—the two things for which they chiefly keep milch cattle. A certain amount of goats' milk is sold in the village, but it is purchased only by those who are suffering, or recovering, from illness.

Each keeper of milch animals was questioned as to the daily yield of milk in the second week of June 1925, and the data collected is as follows :—

				Seers
134 cows in milk yielded	..	..	469	
136 buffaloes „ „	..	..	821	
134 goats „ „	..	..	79	
				— — —
Total	..	..	1,369	
				— — —

Of this, as has been mentioned above, 20 seers of goats' milk are daily sent to Phillour leaving 1,349 seers for consumption in the village. At the time there were 2,591 persons resident in the village, which gives a daily consumption of milk per head at about half a seer or 16 ozs.

- XVI. 6. Maize, wheat, wheat and barley, mixed and wheat and gram, are the chief food grains consumed in the village. An attempt is now made to balance their production and consumption, and it will be seen that the production of these grains in the village is considerably more than is necessary for village consumption. In the following table the total production of the main food crops is worked out on the basis of the matured area and the Settlement Officer's estimated yields.

TABLE LXXXVI.—Statement showing the Total Yield of Grain in Tehong.

Crop.	AREA MATURED		Settlement Officer's assumed yield per acre.	TOTAL YIELD IN		XVI 6.
	<i>Chahi.</i>	<i>Barani</i>		Seers.	Maunds.	
	Acres.	Acres	Seers			
Maize	222	..	800	1,77,600	4,440	
Wheat—						
(a). <i>Chahi</i> ..	427	..	560	2,39,120	5,978	
(b). <i>Barani</i> ..	..	605	313	1,89,365	4,734	
Wheat and Barley—						
(a). <i>Chahi</i> ..	1	..	560	560	14	
(b). <i>Barani</i> ..	.	3	553½	1,660	41·5	
Wheat and Gram—						
(a). <i>Chahi</i> ..	42	..	560	23,520	5·88	
(b). <i>Barani</i> ..	.	102	353½	36,040	901	
<i>Total</i> ..	..	..	..	6,67,865	16,696·5	

Taking now the 2,591 persons resident in the village and working out their cereal consumption according to the tables given earlier in the chapter we get a total consumption for the year of 5,81,917 seers or 14,548 maunds. These figures show a surplus of production over consumption amounting to more than 85,000 seers or 2,125 maunds. In all probability the surplus is greater than this, because, in calculating production the Settlement Officer's estimate of an 'average village' has been taken, while Tehong is noted by him as being "a good strong village".

Wheat and maize are the two food grains generally exported. There are no records of the exports and imports of other food articles. Pulses, sugar, *gur shakkar*, spices, vegetables, etc., are brought by shopkeepers and others and retailed in the village.

7. People of all classes in the village are accustomed to the consumption of wheat during the eight summer months and to maize for the remaining four months of the year. The well-to-do, whether land-owners or non-agriculturists, lay in a stock of grain and *gur shakkar* sufficient for

XVI. ⁷ the whole of the year's needs. Each cultivator also lays aside what he considers sufficient wheat, maize and *gur shakkar* to suffice for his year's requirements and sells only the surplus. Among these classes there is little substitution of one food grain for another, even in times of scarcity. In the case of the menials and *chamars*, however, there is a tendency at such times for the cheaper food grain to be substituted for the dearer, though price is not altogether the governing factor. For example, if wheat and maize are selling at the same prices, or even if one more seer of maize can be had for the rupee, wheat would generally be preferred. In the very bad year 1921, the *chamars* and some other menials, because of the dearth of wheat and the scarcity of maize, took larger quantities of salty and sweet rice for about a month. This, however, was said to have impaired their health, and after a trial they reverted to wheat. Even in their case the consumption of *jowar* and barley is small: the grains are eaten only when they are received as part of the remuneration for services rendered and are never purchased.

So far as *gur* and *shakkar* are concerned there would appear to belittle deviation from the accustomed standard of consumption even in times of scarcity. Large substitution was, however, noted in December 1925. White refined sugar was selling at $3\frac{1}{2}$ seers to the rupee, *shakkar* (yellow sugar) at 4 seers to the rupee and *desi* white sugar (*khanchi*) at 2 seers to the rupee. The substitution of white sugar for *khanchi* was to be expected because of its lower price, but the point of interest is that it was largely substituted for *gur shakkar* even though a little more expensive.

In the case of *ghi* and milk, well-to-do agriculturists have a period of scarcity for about two months every year or so when some of their cattle go dry and others have not come into milk. At such a time the consumption of milk is either given up or a goat in milk is purchased as a temporary measure. This class generally stores surplus *ghi* when the cattle are in milk, and fall back on this in the days of scarcity; even then, however, their consumption of *ghi* depends on the quantity in store and the time which must elapse before an animal is to come into milk again or a fresh animal in milk is to be purchased.

Well-to-do non-agriculturists, whether in possession of milch animals or not, have a more or less constant standard of consumption of *ghi*; so also have *lohars* and *tarkhans*. Some of the Mohammedan menials and the *Arain* tenants, substitute mustard oil for *ghi* for frying vegetables

in times of scarcity, and when this is done the *chapattis* are not smeared with *ghi* at all. XVI
7.

In 1921, a year of great scarcity, some of the *chamars* and others who depended on labour found employment with four owners who were sinking wells in the village, and received from Re 1/- to 1/4/0 a day. In times of scarcity these classes have no compunction about seeking work elsewhere in Phillour, in Lahore, in the *Bar*, or with District Boards, but the other classes seldom seek employment outside the village.

8 With regard to changes in diet during the past 15 years it is difficult to speak with accuracy, but the following broad changes may be indicated. XVI.
8. Ten to fifteen years ago people of all classes used to consume barley *satoos* for breakfast and the midday meal or *chapattis* of mixed wheat and barley in the month of *Chet* (March-April) and onwards for 10 to 30 days in the year, according to their economic conditions. Now barley grain is considered inferior and its cropping and consumption have become nominal; when the grain is produced it is generally used as cattle fodder.

The poorer classes of *Arains* and *chamars* used to gather *piazi* seeds from the fields after the *rabi* harvest and ate $\frac{1}{2}$ to $1\frac{1}{2}$ maunds per family. The consumption of these has also become more or less nominal; when gathered now they are generally given to the cattle.

Fifteen years ago *sheera* syrup (a by-product of *khanchi*) was freely used by the *chamars* and *bhangis* instead of *gur shakkar*, for sweetening *satoos*, *sawian*, and rice, and also for making *sherbet*, but now, even these classes will turn down *gur shakkar* of inferior grades. At marriages they will now use refined white sugar, where *gur shakkar* would have been used fifteen years ago.

During these fifteen years a fall in the general consumption of *ghi* and milk must, however, be recorded. In the year 1910, *ghi* sold at from $\frac{4}{5}$ to $\frac{9}{10}$ of a seer per rupee in the village: its price now varies from $\frac{1}{2}$ to $\frac{11}{20}$ seers per rupee. In the earlier years, both fodder and corn, as well as milch cattle, were cheaper than they are to-day, and it was easier to keep cattle in larger numbers.

APPENDIX A.

GOATS.

App
A.
1 1. On 9th June 1925, the number of goats in Tehong was 248. distributed as follows .—

Female	..	146
Male	..	1
Kids	..	101
		<hr/>
<i>Total</i>	..	248
		<hr/>

None of these belonged to any special variety recognised locally ; all were of the ordinary native breed

App
A.
2 2. The 248 goats, including the kids, are in the hands of 87 owners, excepting the single male animal which belonged to a Mohammedan *hajjam* (barber), but has been let loose by him in the name of a Hindu deity ; it may be regarded as common to the village, for it now belongs to no one but serves all for stud purposes. Of the other animals, 113 goats and 79 kids are owned by 59 persons belonging to the agricultural classes ; most of these are owners of land and co-sharers in the village *shamilat* (common land). Non-agriculturists, including artisans and *kamins*, number 28 and among them they own 33 goats and 22 kids ; except for one man, a *hajjam*, none of the others owns land nor has any share in the *shamilat*.

Of the animals belonging to agricultural classes, 81 goats and 64 kids are owned by 50 Mohammedan *Arains*, of whom 47 are owners and co-sharers in the village *shamilat* (common) ; 3 are non-owners and hence have no share in the village common, but one of them is a holder of some land on *muafi* (free grant) for the maintenance of a *takia*. The main occupation of these three people is goat-keeping. Of the 47 owners and co-sharers in the village *shamilat*, 32 are cultivators, 4 labourers, 6 rent receivers, one a *lambardar* who is also a *sufedposh* and lends money, one a village *chaukidar* (watchman), one a goatkeeper, one is in service, and one is a carpenter by profession who is also a rent receiver.

3. Thirteen goats and seven kids are owned by 5 Sikh *Jats*, of whom 3 are cultivators while 2 are rent receivers : one of the latter also lends money. All the five are owners and co-sharers in the village common.

One goat and two kids are owned by two Mohammedan Rajputs, one of whom is an owner and a co-sharer in the village common ; he is a rent receiver and a *lambardar* of the village. The other man owns no land or share in the common ; he is a vegetable seller.

Seventeen goats and four kids are owned by a Mohammedan *Gujar* App. who is neither an owner of land nor has any share in the village common ; he has ^{A.} 2. goat-keeping for his main occupation.

One goat and two kids are owned by a *Sayed*, who lives on religion. He owns no land or share in the *shamilat*.

Goats and kids owned by non-agricultural classes are as follows.—Two goats are owned by a Mohammedan *ghumar* (potter), who is a *hamn* and lives on his calling. Three goats and three kids are owned by 4 Mohammedan *telis* living on their customary calling of cleaning cotton and pressing out oil.

Four goats and three kids are owned by 4 *ghiwars*, of these one is a Mohammedan, one a Sikh and two are Hindus. All are water-carriers by occupation and also do a little trading casually, the Sikh does money-lending as well.

Ten goats and nine kids are owned by 7 Mohammedan *mochis*; of these six are weavers—(one works also as the village *charkidar*, and one in addition to weaving also receives charity), the seventh is a vegetable seller.

One goat and three kids are owned by Mohammedan *fagirs* who live by begging and on charity; one of them holds some land on *muafi* for the maintenance of a *takia*, but actually none of them owns land or any share in the common.

One goat is owned by a Mohammedan *julaha* (weaver), and one kid by a Mohammedan *mirasi* (minstrel).

Two goats are owned by 2 Mohammedan *hajjams*, barbers by profession; one of them owns a piece of land less than an acre in area, and has a share in the village common.

Three goats and two kids are owned by 2 *tarkhans* and one *lohar*, one a Sikh and two Hindus. They are also engaged on *sepi* labour.

Three goats and one kid are owned by a Mohammedan, who is a *kassab* or butcher.

Three goats are owned by a *Lobana*, who is the guardian of a Sikh shrine. He lives on religion and holds some land in the name of the shrine, but he himself has no share in the village common.

One goat is owned by a *chamar*, who is a leather-worker making shoes, etc.; he also does some field labour.

3 & 4. Usually the goats are looked after by their owners. Some how- App. ever, leave their animals for grazing with those of A., an *Arain*, 60 years old, ^{A.} 3 & 4. and M., a *Gujar*, 30 years old, neither of whom owns land anywhere or has any share in the village common. Goat-keeping is their ancestral occupation and they are known as the goatherds.

App. A. 3 & 4. Influential landowners pay nothing to them for grazing the goats, but the goatherds feel satisfied if they are allowed to graze their animals on the fallow land, and also on the leaves of trees either in the *shamilat* or on private holdings. When their goats have injured some crops they are often saved from the usual shoe-beating through the influence of these owners.

Kamins and others in the village whose goats are grazed by the goatherds make no cash payment, but pay in kind only. For instance, a potter may supply them with a few earthen pots or a *jhirwar* with water for their goats, as desired. In other villages, however, goatherds usually charge about two to three annas per goat per month for grazing.

Night herding is not customary here and the goats are returned in the evening. Those which have gone dry are sometimes left with the goatherds for the night, particularly if there is a male goat in the herd and the owner requires his goat to be covered; no charges are made for such coverings.

App. A. 5. 5. The goats owned by landowners and cultivators are better fed on grains and fodder than those owned by people who intend to sell their goats, and consequently the milk yield is higher and of a better quality. Ordinarily, during a lactation period, which extends to $4\frac{1}{2}$ months, a goat is fed on about 13 *chhatanks* of grain per day in the first month of the lactation, 10 *chhatanks* in the second, and 6 *chhatanks* in the remaining $2\frac{1}{2}$ months; this gives a total of 1 maund 14 seers of grain during one lactation period. The goats are largely fed on the leaves of trees privately owned or those of the *shamilat*, and on fallow lands, and standing crops whenever an opportunity occurs. Straw is given to them on rainy days when out-door browsing is not possible. From November to March goats are given night feeds of *chari* and *senji metha* fodder. Actually the goatherds take them out at night in all seasons of the year, except when it is raining, and feed them on the standing crops of the cultivators without permission.

App. A. 6. 6. Goats live largely on browsing, and the opinion is expressed that milk cannot be expected unless they have browsed. They are seldom confined during the day, but are driven out at about 8 o'clock in the morning and brought back home at sunset. A watch is kept over them to see that no goat is stolen, and they are supposed to be watched also to prevent their damaging the standing crops; when the cultivators are absent, however, the goats are frequently allowed to feed on the crops. The landowners exercise little check on browsing, although complaints of damage by goats to trees and crops are frequent. In answer as to why they do not exercise any check, the reply was, "What can be done; it has been the custom from the days of our fore-fathers." The sympathies of the influential land-owners are won by the goatherds by gifts of milk, lower charges for folding to manure a crop, and by the occasional offering of a kid.

7. Goats compete with sheep and cattle in so far as they are browsed together on the land just after the *rabi* harvest is gathered. There is also always a little grass growing on the fallow lands which the goats eat, on the other hand they will eat plants which have not been touched by the other animals. Land made free from the *rabi* harvest can stand grazing for only about a month and after that, *i. e.*, in May and June, goats are chiefly fed on *tukkas* (fruit or *phalis* of *kikar* and *shisham* trees), though the goats will not touch the leaves of these trees. Leaves of *ber* (plum) and mulberry trees are also fed to them as also those of *phulai*, and *ak* and *malla* shrubs. These fruits and leaves are not touched by other domestic animals, except camels, and thus during this period, when grass is scarce, goats do not compete with other animals for food.

In July, if the rains are timely, grass springs up and goats feed on it. *Malla* bushes are not so much eaten at this time, as they are said to turn bitter.

Grass constitutes the chief food of goats until the end of September, with, of course, occasional attacks on the standing *chari* fodder crop, which is usually gathered in by October and November and goats, along with other animals, come on to the fields thus set free. From November, night-feeding begins, since owing to lack of grazing areas, the goats do not get enough in the day. *Chari* fodder which has been grown with pulses, leaves of trees, and *senji metha* fodder also form part of their fare. As has been said earlier, every opportunity is taken to let them feed without the cultivator's permission on the green *rabi* crops on the fields.

8. In Tehong no cultivating tenants own goats. Landowners who have goats, unlike the goatherds, feel under no obligation to give gifts of milk, etc. Such owners do not purchase fodder for their goats but use that grown on their land. N., an *Arain* non-cultivating landowner, owns 15 goats and gives no milk to win anyone's favour. The manure from his goats is used on his land, which he lets out on share rents, and fodder is grown on it according to his requirements. M., a *Gujar*, has 17 goats and 4 kids and A., an *Arain*, 14 goats and 2 kids. Both these men are goatherds who own no land or share in the village *shamilat* (common land). Fodder for their goats they obtain in exchange for goat manure.

It is estimated that one goat produces roughly three seers of manure per night—day droppings could not be estimated as the goats are in the fields at that time. At this rate, droppings come to 90 seers in a month, or 27 maunds in a year. According to this calculation A.'s goats, including the kids, would probably produce about 400 maunds of manure in the year. A cart-load of goat manure weighing approximately 12 maunds ordinarily sells at a rupee, and consequently A. would earn from the manure of his goats about Rs. 33/-.

Last year when he had the same number of goats with him, he exchanged the manure for two *kanals* of *chari-mung-moth* fodder crop in October, and two *kanals* of *senji metha* fodder in February. If he had to purchase this fodder, it

App. A. 8. would have cost him at that time, Rs. 28/-. A. meets his fodder charges by exchange for manure.

Every year A. gives 10 to 12 seers of milk valued at Rs. 1/4/0 to Rs. 1/8/0, to each of a few influential landowners whenever they have an unexpected demand for it, *e.g.*, when an animal falls ill or for an officer on tour. To one or more of such owners during the year he offers one kid (usually 20 to 25 days old), valued at about a rupee. He also grazes gratuitously eight goats of such owners, thus giving free service worth from Rs. 12/- to Rs. 16/- per year. This is, however, only done by A. and for no apparent economic motive. M., the other goatherd, grazes one or two goats for owners but always charges one to two rupees per year. His milk gifts do not exceed Rs. 1/8/0, and he presents a kid only once in two years or so.

App. A. 9. 9 No grazing fee is levied by the proprietors of Tehong, nor is this levied in the neighbouring villages of the adjoining *tahsil* of Nawanshahr. During winter goat-keepers sometimes buy the branches of *ber* trees for their goats to graze on the leaves and the twigs are used for fuel; each tree costs from eight to ten annas according to the luxuriance of the foliage, and provides seven days' food for one goat. The value of the twigs as fuel is about two annas; generally, however, the owners keep these branches for fencing purposes, and give the leaves away to the goatherd for his labour in cutting them off. In this village no grazing fee is levied by the Revenue or Forest Department, District Board or any other body. At Phillour in summer goat-keepers buy *tukka* from the District Board and the Forest Department.

App. A. 10. 10. 10. Miscellaneous expenses incurred are as follows. Where goats are kept in large numbers they are driven to a shed or an enclosure for the night, but where only two or three are kept they are tethered. The rope for this costs from 2½ to 3 annas, and lasts for about two months.

The cost on medicines may be put at eight annas per goat per year. Once a week goats are also given salt and *masalla* (a mixture of spice and herbs used as a tonic for the animals) consisting of *ajwayan* (seeds of the dill plant) at a cost of about eight annas per year per goat.

App. A. 11 & 12. 11 & 12. Goat manure is used by cultivators and is preferred to cow-dung. The folding of goats on land in order to obtain the manure is considered to give better results than using stack manure, as the latter may have lost much of its value by standing. Goat urine is also considered to be valuable and in folding both urine and dung directly affect the soil, especially if the land is ploughed immediately after every night's folding in order to mix the manure well with the soil. This gives the best result but is not usually done, nor is the folding of goats practised by the cultivators regularly every year; it is only adopted occasionally on such lands as it is thought necessary for improving

the fertility of the soil. The animals are taken into the fields at sunset, and remain there until the following morning when they are taken by the goatherds for browsing elsewhere. While the folding continues, the *zemindar* gives food to the goatherds who guard the animals against thieves. He may also pay Re. 1/- for manuring one *ghumaon* (8 *kanals*) ; for example, M. B gave Rs 7/- to N., a goatherd, for the manuring of his seven *ghumaons* of land last year. A complaint is made that when cash is paid the herdsmen do not manure the land properly, but remove the goats before sufficient manure has been dropped. Where the number of goats is small, it is not usual to take special care to keep goat manure separate from cow-dung, the extra trouble involved is not considered worth while, but where goats are kept in large numbers the manure is stacked separately. N., the *Arain* non-cultivating owner mentioned above, who keeps 15 goats, stacks the manure in a different heap from the cow-dung. The goatherds seldom keep other cattle ; where they do, the dung is converted into cakes for fuel, consequently only goat manure is stacked by them. The *zemindar* attaches more value to pure goat manure. As M., one of the goatherds said, " It attracts the *zemindar* much more and brings us a better price."

13 The keepers of goats generally exercise control over coverings so that the kids may appear in the months of *Phagan* and *Chet* (the middle of February to the middle of April), or *Asoj* and *Katak* (the middle of September to the middle of November) At other times the male is not allowed to browse with the herd. These temperate seasons are considered favourable for the growth of the kids, and enable them to bear the ensuing summer heat or the severe cold of the winter, respectively. During these seasons green fodder crops are plentiful, and the milk yield of goats also increases with a consequent larger share of it for the kids ; it is said that covering is more successful in these months ; the period between covering and the birth of the kid is five months.

14. It is difficult to say how many kids a goat bears during its lifetime, but on an average a goat probably bears from fourteen upwards.

15. It cannot be said at what age, or after which lactation, goats are slaughtered ; supply and demand of meat and the milk yielding capacity of the goat, are the chief factors in determining the age for killing. When a male goat is not available a female goat is slaughtered instead. A goat may also be killed or sold to a butcher if it falls ill and is not expected to survive ; the goatherd distributes the flesh among his friends or those in whose good books he wishes to remain. When female goats are slaughtered, it is usually at quite an early age, but generally they are retained except for special reasons such as disease, age, undue fatness or low yield of milk.

App. 16. To find out the milk yield of goats two animals belonging to A., an
A. Arain, were placed under personal observation and the results are given below :—

Case No. 1.

The goat gave birth to a kid on 27th September, 1925.

<i>Date of Examination.</i>	<i>Yield of Milk in seers.</i>	<i>Remarks.</i>
27-9-25	$\frac{3}{4}$	Excluding kid's share.
5-10-25	$\frac{3}{4}$	"
15-10-25	1	"
27-10-25	$1\frac{1}{2}$	The kid was removed.
10-11-25	$1\frac{1}{2}$	
25-11-25	$1\frac{1}{2}$	
2-12-25	$1\frac{1}{4}$	
10-12-25	$1\frac{1}{8}$	
26-12-25	1	
10-1-26	$\frac{3}{4}$	
28-1-26	$\frac{1}{2}$	
8-2-26	$\frac{1}{4}$	
12-2-26	..	Supply stopped.

Case No. 2.

The goat gave birth to a kid on 23rd October, 1925.

23-10-25	$\frac{1}{2}$	Excluding kid's share.
27-10-25	$\frac{1}{2}$	"
10-11-25	$\frac{1}{2}$	"
17-11-25	$1\frac{3}{4}$	The kid was removed.
25-11-25	$1\frac{3}{4}$	
2-12-25	$1\frac{2}{3}$	
10-12-25	$1\frac{1}{2}$	
26-12-25	$1\frac{1}{3}$	
10-1-26	$1\frac{1}{8}$	
28-1-26	1	
8-2-26	$\frac{7}{8}$	
12-2-26	$\frac{3}{4}$	
22-2-26	$\frac{1}{2}$	
2-3-26	$\frac{3}{8}$	
15-3-26	$\frac{1}{4}$	
25-3-26	..	Supply stopped.

Assuming that the goat continued to yield milk in the same quantity from one date of the test to the next following, the normal yield of milk in one lactation, in the case of the first goat was 144 seers, and that of the second 146 seers. It would, therefore, seem that a goat yields milk for $4\frac{1}{2}$ to 5 months in one lactation and that its yield of milk during that period, on the average of the two goats examined, is about 145 seers.

17. The milk of the goats may be drunk plain or as *lassi* by the owners' family, or sold, especially if there is a surplus available in the village. A, one of the goatherds, sells his milk in Tehong only and does not contract with any confectioner at Phillour like M, the other goatherd. In Tehong the milk is sold at from eight to ten seers to a rupee according to the demand for it. M sells to the confectioner at Phillour at the rate of twelve seers to the rupee, and carries the milk to him daily. The confectioner has paid M. Rs. 80/- in advance and the latter prefers this to the irregular demand of the village customers, as he gets his money in advance in a lump sum, even though it means a daily journey of six miles to deliver the milk. If we assume that the average rate is ten seers to a rupee then the 145 seers of milk given by the goats under observation, would bring in Rs 14/8/0 during each lactation period. A goat is usually milked twice a day, morning and evening, although it is a docile animal and can be milked at any time and as many times as desirable

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18. Goat's milk is regarded as poorer in quality than cow's milk, and much more so than a buffalo's. The chief consumers are those who cannot afford cow's milk; people in better circumstances think it below their dignity to consume goat's milk, and although they sometimes keep goats to supplement the milk from the cows, it is usually because goat-keeping is less expensive, and their milk often tides over a dry period until their milch cattle come into milk again; as U. S. and H. S., two landowners, said, "Goats we keep for nothing. It does not matter even if we drink goat's milk for a month or so until our buffaloes come into milk again." Goats are usually only kept by people who cannot afford to maintain cows or buffaloes

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19. Kids are allowed their mother's milk by the goatherds for three or four weeks, by which time they have learnt to eat the leaves of the *ber* tree and can be weaned. During the suckling period a kid is allowed a half to one seer of milk per day, but where there are two kids the share for the two is reduced from $\frac{3}{4}$ to $1\frac{1}{2}$ seers. Less milk is given to male than to female kids; kids which promise to become good goats are allowed the whole of their mother's milk until they are weaned. Kids of goats belonging to private owners, may take as much as two months before they are entirely weaned.

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20. Goat's milk is turned into *lassi*, butter or *ghi*, but owing to its poor quality, the yield of the last two is comparatively small. Well-to-do people use it only for drinking, or in tea or *sardaie* (sherbet of milk, sugar and water), only poorer people and the goatherds use it for *lassi*, or in the making of butter and *ghi*.

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21. The *kassabs* (butchers) slaughter goats of both sexes normally when they are six months to two years old, males are preferred, but females are also slaughtered for the reasons already given, or when they are sterile. The average amount of meat per animal is about twelve seers and it usually sells at from six to eight annas per seer.

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App. 22. The Sikhs are forbidden by their religion to eat the meat of an animal which has not been killed by *jhatka* (slaughter by one blow), while Mohammedans can only eat the meat of those which have been slaughtered according to Muslim rites. A few Hindus follow the Sikh custom but most of the Hindus in the village purchase meat from the butcher. Except Brahmans, *Khatris*, two *Banias*, the womenfolk of the Hindus and some Sikhs, all the people of the village eat goat's meat. There is only one meat shop, that of a *kassab* (Mohammedan butcher). Well-to-do people other than the Sikhs, for whom no *jhatka* shop exists, eat goat's meat about once or twice a month and so do the labouring classes who receive cash wages, tenants and agricultural labourers eat it once a month or even less, *sunars* (goldsmiths) eat it two or three times a week.

App. 23. The Mohammedans slaughter goats on their two major festivals—*Id-ul-fitr* and *Bakr-Id*. In the year 1925, ten goats were slaughtered on the former occasion and fifteen on the latter; the other people have no special time for slaughtering these animals.

App. 24. The import and export of goats are not recorded; people buy and sell as and when they like. During the year of inquiry it was estimated, that meat-sellers from outside sold in Tehong the meat from 104 goats, nine of which were purchased here. The village butcher was estimated to have sold the meat from 52 goats, whereas he had purchased only 12 in Tehong. Of the 25 goats sacrificed on the two *Ids* (festivals) only 6 were purchased in the village. Thus of the 181 goats, the meat of which was sold in the village, only 27 were purchased here and the remaining 154 brought from outside; hence the village is not self-sufficient in its requirements of goats' meat. During the year, goats were sold at from Rs 8/- to Rs 22/- for keeping, and from Rs. 6/- to Rs. 9/- when intended for slaughter.

App. 25. The bones of a goat are sold with the meat and in the estimate of goat's meat (10 to 14 seers) the bones have been included. The dead bodies of goats which die a natural death, are eaten by the sweepers to whom they go as a right; no use is made of the bones, they are thrown away.

App. 26. Goats' hair is never sold, but is thrown away, except when taken by the *ghumars* (potters), for making *goons* or bags used to carry loads on mules and donkeys, in exchange for one or two earthen pots.

The horns are useless but the hides are sold at one rupee each to traders, who come from Hoshiarpur and Ludhiana. They are turned into leather for shoes or are used to cover small drums, or made into *mashaks* (bags for carrying water).

App. 27. In addition to the meat and the other things mentioned above the following constituents of a goat's body are sold.

(a) *Andan* (intestines). These are twisted into *tands* or leather thongs, which are used by *penjas* or cotton teasers to make their bows. One animal's intestines cost half an anna.

- (b). *Peti* (paunch) go to poor people who cannot afford to purchase meat ; they are also given to dogs. If sold, the *peti* from one animal brings in one anna App.
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- (c). *Salagal* (lungs, liver, spleen and heart) sells at the same rate as the meat, *i.e.*, its price is from three to four annas
- (d). *Halali* (liver) is eaten by poor people only and costs three to four pice.
- (e). *Siri* and *khundroo* (head and hoofs) are sold together and bring in from four to six annas.

28. The Settlement Officers have made no remarks in the Village Note Book regarding profits from goat-keeping. App.
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29. The following table gives the figures for the number of goats in Tehong at different periods :— App.
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29.

<i>Year.</i>	<i>No. of Goats.</i>
1881	214
1885-86	361
1887-88	303
1891-92	150
1892-93	177
1899	339
1904	529
1909	316
1914	263
1920	174
1923	311
1925	248

30. *Ods*, nomadic goat-keepers, Muslims by religion, are said to visit the village occasionally, and are employed in making the boundaries of village fields. They generally make short stays of a few days, and stop outside a village on fallow fields or uncultivated *shamilat* lands, for which they pay nothing but their goats browse freely on the lands and on the leaves of trees. If, however, they are asked to fold their herds on a particular land to manure it they make a charge. In cases of longer halts they shift their locations, and, as has been mentioned earlier, they charge cooked food for at least four men for as many days as they fold the goats on the land, alternatively they charge one rupee per *ghumaon* of land ; they also get the fuel from the trees and water free. App.
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31. There are ceaseless complaints against the goatherds. Many co-sharers in the *shamilat* complain against the depredation of the goat-keepers whose animals do considerable damage to sugarcane and other crops : bitter complaints are also made of damage done to trees. The *darogha* of the District Board Arboricultural staff made no complaint against the goat-keepers of Tehong, App.
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31.

App. but of those villages nearer the road, he said "Every day despite the harsh
A. treatment meted out to them they do not refrain from their depredation."
31.

The goat-keepers are often said to bribe the lower servants of the staff so that their mischief remains undiscovered. Complaints have been made by the Phillour Forest Department concerning depredation by goats, and owners have often been prosecuted, but this seems to have had little effect. Occasionally damage done by goats leads to violence, especially on the main roads or near the Phillour *rakh*.

App. 32. It was pointed out that goats are responsible for the absence of trees
A. towards the west portion of the *Dhaha* and also towards the north where some
32. *ber* trees were standing shorn of branches and leaves. It was also said that there were now fewer trees on the *Bet* side of the village due, as R said, to the fact that, "where there are goats it is impossible for trees and leaves to grow."

App. 33. The *zemindars* feel the decrease in the supply of wood for implements
A. and fuel. As B. said, "Fuel has always been free to the *zemindar*, but now we
33. are helpless. The goat-keepers do not leave any wood on the trees nor allow fresh trees to grow and we are often compelled to buy wood for fuel." Two other men said much the same, and all landowners badly desire a speedy remedy from the continuous damage done by goats to the trees and crops.

App. 34. The goatherds keep a *dhanga* and a *hathra*. The former is a long bamboo
A. eight to ten feet in length with a curved iron blade at the end, which is used for
34. lopping off the high branches of trees. The latter is something like a knife with a wooden handle, eight inches long, with a blade of the same length and about three inches broad and generally curved at the end. These instruments are said to be so strong and sharp that they can easily cut a branch as thick as the thigh of a man. The use of axes are, therefore, not necessary, but small *kulharis* (hatchets) are used occasionally when the other things are not available. Observation shows clearly that goatherds are never content with lopping off leaves alone; they try to cut branches also for fuel.

App. 35. Investigation failed to disclose any part of the village to which the
A. goats did not have access and consequently no comparison of any two areas was
35. possible; moreover, the goat-keepers and their herds do not remain within the village boundary but go as far afield as three miles and sometimes even beyond.

App. 36. Goats are kept everywhere in the Jullundur District. Inquiry from
A. goatherds here and at Musapur in the Nawanshahr *tahsil* and *zemindar* friends
36. in the Nakodar and Jullundur *tahsils* show that the customs and privileges of the goatherds throughout the District are much the same.

App. 37. No attempt seems to be made to improve the breed by selection of the
A. sire. The breed of a goat is judged by its milk yield and also whether it can live
37. on ordinary food, including leaves, left untouched by other domestic animals.

APPENDIX B

QUESTIONNAIRE USED BY INVESTIGATORS.

I—GENERAL.

1. Physical description of village and soils.
2. Statistics of population for all censuses that have been taken. Distribution, if available, by sex, age and caste. Causes of changes in population. Mortality from plague, influenza, cholera and other serious epidemics: point out if mortality was particularly severe between certain ages, or in either sex.
3. Marriage. Age of marriage for boys and girls in the various communities.
4. What is the size of an average family?
5. Prepare a statement showing—
 - (1) The number of (a) persons, (b) families, who depend on agriculture for their livelihood, and classify as follows—
 - (a). (i). wholly dependent,
 - (ii). partly dependent;
 - (b) (i) rent receivers only (*i.e.*, non-cultivating owners),
 - (ii) actual cultivating owners,
 - (iii). rent payers (tenants) only,
 - (iv) labourers,
 - (v). others, for whom details should be given.
 - (2). The number of (a) persons, (b) families, whose chief means of livelihood is cottage industry.
 - (3). The number of (a) persons, (b) families, who do not follow any productive calling and live on charity, begging, religion, etc., etc.
 - (4). The number of (a) artisans, (b) families, of artisans in the village. Give details.
 - (5). The number of (a) field labourers, (b) families of field labourers
 - (6). The number of (a) persons, (b) families, whose principal means of livelihood is agriculture, but who depend upon other occupations, such as industry, field labour, grass and wood selling, *gadda* hire, service, etc., to supplement their income from agriculture.
 - (7) The number of (a) persons, (b) families, whose principal means of livelihood is any occupation other than agriculture, but who follow agriculture as a subsidiary calling.
 - (8). The number of persons who live outside the village for a large part of the year and who earn their livelihood in professions such as service.
 - (9). The number of—
 - (i). military servants,
 - (ii). teachers,
 - (iii). pleaders,
 - (iv). civil servants,
 - (v) persons who work in cities as menial servants,
 - (vi). pensioners.
- NOTE—Distinguish between those persons who, or whose families, are resident in the village more than nine months in the year, and those who, although natives of the village, ordinarily spend less than three months in it.
- (10). Number of (a) persons, (b) families, living on money-lending and trade. Give, if possible, details as to income-tax paid in recent years.
6. How does a cultivator employ himself in hours not spent in work connected with the cultivation of the land?
7. How does a cultivator employ himself in slack seasons—
 - (a). When agricultural conditions are normal; (b). when they are abnormal? Does he follow any subsidiary industry?

8. Describe fully the way in which village artisans and menials are paid by cultivators
Describe their rights and privileges in the village.
Give annual wages usually paid to each class and also *inams* and other dues paid on the occasions of social and religious ceremonies
9. Describe fully the economic position of a field labourer in the village organization. Describe his rights and privileges in the village
How is he paid?
Is there a tendency for younger men to emigrate to the towns? If so, in what capacity?

II.—CROPPING AND CULTIVATION.

1. Give from the *Mulan Ragba* statement of the Village Note Book an abstract showing for the village as a whole:—

	Total area	Banjar Kadim.	Banjar Jadid.	Cultivated area with classes of soils.
1900				
...				
...				
1920 (or nearest year)				

2. Prepare from the Jinswar statements of the *Lal Kitab* a statement in the form shown on page 305, with any modification that may be necessary for the particular village, showing the average cropping for the past five years.
3. Have any important changes occurred in the cropping during the past twenty years; if so, what?
4. Take about 50 fields representative of different classes of soils, and from the *khassra girdawars* examine the cropping for the last eight harvests in order to see what are the most common rotations of crops
5. Have the high prices of (1) cotton, (2) sugarcane, resulted in their cultivation being extended?
6. What crops are manured? What manure is used? Whence is it obtained? How much is used per acre for each crop? When is it applied?
7. Give in the form of a calendar an account of the year's operations on two holdings of different sizes selected from the following, 2, 5, 10, 20, 50 acres, showing month by month the number of workers, etc
What crops are irrigated by (a) wells, (b) canals, (c) other means of irrigation? Give the usual number and dates of waterings for each. What number of waterings for each of the chief crops do the zemindars consider necessary to give the best results?
9. Are the fields carefully levelled for irrigation by (a) wells and (b) canals? Is there any waste of water?
10. What is the number of ploughings usually given for each of the chief crops and when are they given? Does this vary on different classes of soils?
11. Is weeding regularly done? If so, for what crops? Who do the weeding?
12. Have any improved implements been introduced in the village? If so, whence have they been obtained?
13. Have any selected varieties of seeds, as recommended by the Agricultural Department, been adopted in the village? If so, what? Give details of numbers and varieties. Have the results been good? Give, if possible, the increase in yields or other advantages obtained from the use of selected seed?
14. What improved methods of cultivation, if any, have been adopted? What have been the results?
15. Where is the nearest Demonstration Farm? Have any demonstrations been made in or near the village? Have any of the zemindars visited an Experimental or Demonstration Farm? If there is a District Agricultural Association, do the zemindars know anything about it? Has it conferred any practical benefit on the village?
16. Where is the nearest rain-gauge? Give monthly figures of rainfall for each of the past ten years.

III.—IRRIGATION

- 1 What are the sources of canal irrigation? Is the village situated near the "tail"?
2. Is irrigation by flow or lift?
- 3 Is canal irrigation received in both harvests? In the *rab* is canal water obtained for sowings only, or are subsequent waterings also possible?
- 4 When does canal irrigation usually begin, and when does it stop? Is it continuous or by rotation on different branches or minors of the canal?
- 5 How is the internal distribution of water made between cultivators? Is it a fair distribution? Do cultivators, who do not require water when their turn comes round, sell it to others? If so, at what rates?
- 6 Give the number of wells (a) in use, (b) capable of use, now and twenty years ago
7. When are the wells usually worked? Give the number of yoke for each well and the hours of work done by each yoke in one day. What area can a well irrigate in twenty-four hours assuming the number of yoke to be sufficient to keep the well in work the whole of that time? Give depth of water, and number of hours the well can be worked.
- 8 Is canal irrigation assisted by wells? If so, when and to what extent, and for what crops?
9. If there are *barani*, well and canal holdings in the village compare the labour and cattle necessary for the proper cultivation of ten acres of *barani*, well, and canal lands respectively. Give the figures for labour and cattle for any of these three types of holdings that may exist in the village and illustrate them by the actuals of ten holdings of various sizes

IV—HOLDINGS.

1. From the total number of owners in the village as given in *Statement 6* of the Village Note Book deduct the number of those whose names have been counted more than once. Divide the total cultivated area of the village by this number and so get the cultivated area per owner. Compare the result with that obtained for a similar calculation on the figures of 1900.
2. If any of the owners own cultivated land outside the village, add the area so owned to the total cultivated area of the village, and divide by the number of owners as found in 1 above and so obtain the *total* cultivated area per owner. Note the number of owners who do not cultivate at all.
3. Give a statement showing—
 Number of proprietary holdings owned:—
 (a). by a single owner.
 (b). " 2 persons jointly.
 (c). " 3 " "
 (d). " 4 " "
 (e). " 5 " "
 (f). " more than 5 persons jointly.
4. Prepare a statement as follows.—
 Number of owners who own—
 (a). less than 1 acre cultivated land.
 (b). between 1 and $2\frac{1}{2}$ acres land.
 (c). " $2\frac{1}{2}$ " 5 " "
 (d). " 5 " $7\frac{1}{2}$ " "
 (e). " $7\frac{1}{2}$ " 10 " "
 (f). " 10 " 15 " "
 (g). " 15 " 20 " "
 (h). " 20 " 50 " "
 (i). more than 50 acres land.

NOTE—1. In the case of (a) above, give a complete list of owners with their caste, main occupation, etc.

- 2 In this statement if three owners own 8 acres jointly and nothing more in the village, all three will come into (b).
3. For this statement take first of all only the cultivated area of the village concerned, but in a Remarks Column show the effect of taking into account the cultivated land owned outside the village, e.g. if cultivated area outside the village is also taken into account 3 of the owners in class (e) will come into class (f), and 2 in class (f) into class (g)

5. For classes (a), (b), (c), (d) and (e) above, ascertain which of the owners cultivate the whole or part of their own land and in addition also cultivate other land as tenants. Then prepare a revised statement as follows:—

Number of owners who cultivate:—

- (a) less than 1 acre (..acres owned, ..acres rented).
 (b). between 1 and $2\frac{1}{2}$ acres (. " " ; . " ").
 (c). " $2\frac{1}{2}$ " 5 " (. " " . " " ").
 (d) " 5 " $7\frac{1}{2}$ " (. " " . " " ").
 (e). " $7\frac{1}{2}$ " 10 " (. " " . " " ").
6. For (a), (b), (c), (d) and (e) in paragraph 4 above, state for each sub-division, (1) the number of owners who actually cultivate in the village; (2) the number who cultivate elsewhere as tenants or owners, (3) the number who, on account of old age, infirmity, youth or other disability, neither cultivate nor have other means of livelihood, (4) the number of owners who do not cultivate, but have other means of livelihood, (a) inside the village, (b) outside it, and state what these are, (5) the number of owners who cultivate and have also other means of livelihood, regular or casual. State what these are
7. How many owners are resident in the village?
 How many of them cultivate? What do the others do?
8. How many owners are non-resident? Of the non-resident able-bodied men, how many are (a) in the Army, (b) in Government service, (c) in other service, (d) casual labourers? Give a statement of pay and earnings
9. Give a list similar to 3 above showing—
 Number of cultivating holdings cultivated:—
 (a) by a single cultivator.
 (b) " 2 cultivators jointly.
 (c). " 3 " "
 (d) " 4 " "
 (e) " 5 " "
 (f). " more than 5 cultivators jointly

NOTE—Hired labourers will not be counted as cultivators for this purpose.

10. Prepare a statement similar to 4 above showing—

Number of cultivators who cultivate—

- (a) $2\frac{1}{2}$ acres cultivated or less
 (b). between $2\frac{1}{2}$ and 5 acres cultivated.
 (c). " 5 " $7\frac{1}{2}$ " "
 (d). " $7\frac{1}{2}$ " 10 " "
 (e). " 10 " 15 " "
 (f) " 15 " 20 " "
 (g) " 20 " 50 " "
 (h) more than 50 acres cultivated.

NOTE.—1 Cultivating owners and tenants, whether owners or not, will come into this account

2. If three tenants cultivate 9 acres jointly, each will be credited with 3 acres; if, in addition, one of them cultivates 4 acres alone, he will come into class (c).
 3. Show the effect on the classification, of taking into account land cultivated outside the village
 4. Where there are sub-tenants, these, and not the tenants under whom they hold, should be counted. Hired labourers should not be included, but partners in cultivation should.
11. What is the number of—
 (i) occupancy tenants,
 (ii) non-occupancy tenants under owners or occupancy tenants,
 (iii). sub-tenants under tenants-at-will,
 (a). who own no land at all,
 (b) who own no land in the village.

How many are permanently resident in the village? Give the length of tenancy to date as follows:—

- (a). Less than 3 years.
 (b). Between 3 and 5 years.
 (c). " 5 " 10 "
 (d). More than 10 years.

NOTE.—Where a son or nephew has carried on the tenancy of his father or uncle, etc. the tenancy should be regarded as continuous.

12. Of the tenants, how many are village menials? How many tenants have supplementary means of livelihood and what are the supplementary means?
13. Read Chapter III. of Dr. Mann's "*Land and Labour in a Deccan Village*."* Prepare a statement of proprietary holdings similar to that on page 47, and a statement similar to that on page 51 for cultivating holdings.
NOTE—Plot in this connection means not necessarily a *khasra* number. It is used to denote an unbroken piece of land and will include several *khasra* numbers, if these are continuous and held by the same owner or cultivator, as the case may be.
14. Illustrate graphically the fragmentation of proprietary and cultivating holdings as in the charts facing pages 46 and 52 of Dr. Mann's book.
Take ten proprietary holdings and illustrate five on each of two sheets, choosing two extreme cases of fragmentation and the rest ordinary ones. Do the same for ten cultivating holdings.
15. Take four proprietary holdings in which there is much fragmentation. By means of the genealogical tables and the settlement records of the various settlements trace the history of each back as far as possible showing how fragmentation has been the result of (a) succession, (b) sales, gifts and exchanges, (c) partitions.
Give examples, if any can be found, of the reverse process of consolidation due to owners dying without sons, exchanges, purchases, etc.
16. Take four cases in which partition has occurred. Show graphically the extent of fragmentation before and after partition. If possible, select two areas in which more than one partition has occurred.
17. What are the practical disadvantages of fragmentation in this village? Illustrate your answer by reference to specific instances. If possible, give details of litigation arising from boundary disputes. In particular, inquire whether any land is lying uncultivated owing to excessive fragmentation. Give a list of some of the smallest plots and say what use is made of them.
18. Can you give any instances in the village in which a cultivator could actually reduce the number of workers employed on his holding if consolidation were effected?
In practice, would the cultivator reduce his labourers or would the same labourers be used, but for less time?
19. What are the objections urged by the zemindars against consolidation of holdings? Have any of them voluntarily agreed to consolidation? Have practical benefits resulted?

V.—EFFECT OF TENANCY.

If possible, compare in as much detail as possible several holdings cultivated by their owners with several holdings cultivated entirely by tenants who are not themselves mortgagors nor relations of the owners of the holdings they cultivate. For the purpose of this comparison, tenants who do not cultivate themselves should not be included.

1. Is there any difference in the methods of cultivation, number and dates of ploughings, manuring, etc.?
2. Is there any difference in the cropping?
3. Is there any difference in perennials, such as trees, etc., on the holdings?
4. Is there any difference in efforts at improving land?
5. Is there any difference in the cattle, etc., kept?
6. Is there any difference in the buildings?
7. Is there any difference in education of the children?
Amplify, if possible, by reference to actual facts and figures.
8. Is there any difference in the careers of the children (i. e., working as agriculturists, engaging in other business, migrating to towns, taking service, etc.)?
9. Is there any difference in the standard of living, or of debt, and in the facility with which credit can be obtained?
10. Do tenants join Co-operative Societies as freely as owners?

*University of Bombay, Economic Series No. 1, Oxford University Press, Bombay.

VI.—LAND REVENUE AND TACCAVI.

1. What was the fixed land revenue imposed at previous settlements and at the last settlement?
2. Give the incidence per cultivated acre of the present fixed demand
3. What portion, if any, of the fixed demand is deferred on account of (a) protective well leases, (b) other causes?
4. Attach a list of occupiers' rates charged on canal irrigation
5. What has been paid by the village in each of the past five years for (a) Land revenue, (b) Cesses, (c) Occupiers' rates, (d) Total
Give the average of the period, and the average incidence per matured acre
6. What coercive processes, if any, have been issued during the past five years for (a) land revenue fixed, (b) land revenue fluctuating? Has land revenue been paid punctually? Has the lambardar had to pay part of it out of his own pocket and then recover from owners?
7. How is the money for land revenue obtained? Is surplus produce sold? Is it paid out of earnings from casual labour? Is the money for it borrowed? Has any money been borrowed for this purpose from Co-operative Societies? If so, when, by whom and how much?
Take 30 specific cases representing large, medium and small owners and record the results
8. In cases where money was borrowed for the payment of land revenue inquire carefully into the causes. Did the borrower sell any of his produce of the harvest in question before or after the payment of land revenue? If so, what did he do with the money so obtained? Did he buy cattle or other necessities with it? Did he use it to pay off debts?
9. Are the dates fixed for the payment of land revenue convenient for owners? If not, what other dates would be more convenient?
10. What (a) remissions, (b) suspensions, of land revenue, have been granted during the past ten years? Why were they granted in each case?
11. Make enquiries similar to those detailed in 8 and 10 above for the payment of occupiers' rates
12. What *taccavi* has been taken for (a) sinking of wells, (b) other improvements, (c) purchase of cattle, fodder or seed, during the past ten years?
13. Were the instalments repaid with ease? If not, how were they paid? Were any coercive processes necessary? Was there any attachment and sale of property?
14. Is *taccavi* popular? Are loans taken from money-lenders when *taccavi* might be taken? Give specific cases, if any, and record the reason. If *taccavi* is not popular, what are the reasons, as given by the zemindars?

VII.—INDEBTEDNESS

1. What are the chief purposes for which loans are taken? Give approximate percentage of principal in each case, showing what is due to (a) personal expenditure, such as food, clothing, marriage, funeral, litigation, (b) professional expenditure such as seed, cattle, land improvement, land revenue, *taccavi*, rent, purchase of land.
2. If a member of a Co-operative Society for five years or more, state.—
(i). amount of old debt repaid by borrowing from the society,
(ii). amount of old debt repaid by his own saving,
(iii). land redeemed by borrowing from the society,
(iv). land redeemed by his own saving,
(v). land bought,
(vi). land taken in mortgage
Give amount paid in each case.
3. Who are the money-lenders? Zemindars or non-zemindars? Give then number in each case. Are zemindars replacing non-zemindars as money-lenders, and with what results? Give the ordinary business terms of each class. Do they vary their terms according to the security offered? On what security is money lent? What are the terms of repayment? Is recovery of loans strictly enforced?
4. Give the approximate yearly income of persons whose chief profession is money-lending?
5. Try to ascertain the sources from which repayments are made, as for example:—sale of produce, grain or fodder, sale of cattle, sale of land, mortgage of land, sale or mortgage of houses, cash earnings, or other sources
6. From above discuss actual indebtedness you observed: how far due to poverty, ignorance, social observances, improvidence, temptation of increased credit and increased prosperity, diminished ability to repay through reduction of income, bad seasons, unsound credit. Is (a) the land revenue, or (b) enhancement of land revenue, or (c) too early a date for payment of the same, mentioned as a cause? Do the money-lenders encourage debt?
7. Can you give any facts as to the effect of indebtedness on the people?

VIII.—MORTGAGES.*

GENERAL

1. Give an abstract from *Statement No. 6* of the Village Note Book, showing quadrennially for the last 20 years—
 - (a). Number of mortgages
 - (b). (i). Total area mortgaged
(ii). Cultivated area mortgaged.
 - (c). Land Revenue assessed on mortgaged area
 - (d). Proportion that total and cultivated area mortgaged bears to the total and cultivated area of village.
2. Give for each mortgage the following information :—
 - (a) (i). Total area owned by the mortgagor.
(ii). Cultivated area owned by the mortgagor
 - (b). (i). Total area mortgaged
(ii). Cultivated area mortgaged.
 - (c). Date of mortgage.
 - (d). Amount of mortgage debt and multiple of land revenue it represents.
 - (e). Form of mortgage :—(a) whether for fixed term, in which case, length of period and year of expiry should be given, or (b) until repayment of mortgage debt, etc., with possession or without possession.
 - (f). Whether, when the mortgage is with possession, the mortgagor cultivates as a tenant, and if so, on what rent? If not, who cultivates the land?
3. Prepare a statement in the following form :—
Number of proprietary holdings in which there are mortgages
 - (a). Total..
 - (b). Of which cultivated area owned is less than 1 acre.
 - (c). " " " " between 1 and $2\frac{1}{2}$ acres.
 - (d). " " " " $2\frac{1}{2}$ " 5 "
 - (e). " " " " 5 " $7\frac{1}{2}$ "
 - (f). " " " " $7\frac{1}{2}$ " 10 "
 - (g). " " " " 10 " 15 "
 - (h). " " " " 15 " 20 "
 - (i). " " " " 20 " 50 "
 - (j). " " " " more than 50 "

4. Prepare a statement as follows :—

Mortgages made in last quadrennium previous to 1902 in which quadrennial jamabandi was prepared, and in each succeeding quadrennial jamabandi.	Total area under mortgage.	Cultivated area under mortgage.	Mortgage debt.	Average mortgage value per acre.	Average mortgage value per acre cultivated.	Mortgage debt as multiple of land revenue
(1)	(2)	(3)	(4)	(5)	(6)	(7)
..	200	150	$\frac{20,000}{15,000}$	$\frac{100}{75}$	$\frac{133}{100}$	$\frac{160}{120}$
..
..

NOTE.—1 The necessary information will have to be obtained from *Statement No. 5* of the Village Note Books.

2. Where the mortgage money actually received was less than that recorded in *Statement No. 5* of the Village Note Book or in the mortgage deed, the actual, if ascertainable, should be entered in red ink below that recorded in column 4 above. Entries in columns (5), (6) and (7) should also be made on the basis of actuals, as illustrated above

*The Special Questionnaire for Mortgages should be answered if the investigator thinks useful results will be obtained.

5 Redemption—

- (a). Give information for redemptions similar to that given for mortgages in para 3 above
 - (b). Prepare a statement for redemptions similar to that given in statement para. 4, but omit the last 3 columns
 - (c). For each of the redemptions made between 1913 and the present day ascertain whether (1) redemption was automatic, (2) other land was sold or mortgaged in order to effect the redemption; (3) redemption was made by the owner, mortgagor or a subsequent vendee, (4) how the money was obtained to carry out the redemption
 - (d). Have mortgages, not subject to automatic redemption, been redeemed and other mortgages, subject to automatic redemption, contracted in their place? Give in each such case briefly the terms of the old mortgage and of the new—(area, mortgage debt, interest payable, period of new mortgage, etc.).
- 6 For the total mortgages now in existence state what area is mortgaged to—
- (a). zemindars of the village,
 - (b). other zemindars,
 - (c). money-lenders, not belonging to agricultural tribes,
 - (d). others

Give any information you may acquire about money-lending mortgagees.

7. Have landowners who wish to mortgage their land any difficulty in finding mortgagees?
8. Have mortgagors who wish to change a mortgage of a more burdensome kind into a mortgage under Section 6 (a) of the Land Alienation Act any difficulty in doing so? Is there any combination among money-lenders to prevent this?
9. In cases where mortgages have been contracted during the past ten years, ascertain:—
 - (a). The reason why the mortgage was made.
 - (b). Did the mortgagor get the money in cash? If so, what did he do with it?
 - (c). If the mortgage consideration was extinction of debts, how were these debts contracted?
 - (d). Where there are several shareholders, ascertain whether the mortgage is by all or by only some of the shareholders.

IX.—SALES OF LAND

1. Prepare a statement as follows.—

Sales made in last quadrennium previous to 1902 in which quadrennial jamabandi was prepared, and in each succeeding quadrennial jamabandi.	Total area sold	Cultivated area sold	Sale prices.	Average sale value per acre, i e., 4/2.	Average sale value per acre cultivated i e., 4/3.	Sale price as multiple of land revenue.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			Rs.	Rs.	Rs.	
..	200	150	20,000 15,000	100 75	133 100	160 120
..
..

- NOTE.—1. The necessary information will have to be obtained from *Statement No. 5* of the Village Note Books.
2. Where the sale price actually received was less than that recorded in *Statement No. 5* of the Village Note Books or in the sale deed, the actual, if ascertainable, should be entered in red ink below that recorded in column 4 above. Entries in columns (5), (6) and (7) should also be made on the basis of actual, as illustrated above.

2. Show for each quadrennial period the sales—

- (i). By agriculturists—
 - (a). to zemindars of the village,
 - (b) other zemindars,
 - (c) money-lenders, other than those of agricultural tribes,
 - (d). others
- (ii). By non-zemindars—
 - (a) to zemindars of the village,
 - (b) other zemindars,
 - (c) money-lenders, other than those of agricultural tribes,
 - (d) others.

Give any information you may acquire about money-lending vendees.

- 3. Have any persons who formerly did not own land in the village or elsewhere purchased land in the village during the past twenty years? How many of these were, at the time of purchase, cultivating land as tenants-at-will in the village or elsewhere? What were their castes?
- 4. Have any small holders (owners of less than 5 acres cultivated at time of sale or purchase)—
 - (1). lost land by sale during the past twenty years?
 - (2). gained land by purchase during the past twenty years?
 What was the effect—
 - (1) on reducing their holdings?
 - (2) on increasing their holdings?
- 5. Investigate in the case of ten sales made during the past five years the causes of sale
- 6. Have any sales been made during the past ten years in order to redeem mortgages on other land? If so, give details
- 7. Have any mortgages been made during the past ten years in order to purchase other land? If so, give details.

X.—SALE OF VILLAGE PRODUCE

- 1. Describe the methods of sale—
 - (i). Give the prices at which six principal crops of the village were sold in each of the last five years
 - (ii). Give also the prices of these six products for each year as entered in the Circle Note Book.
 - (iii). State generally who are the purchasers and how the prices are fixed between them and the growers. Note specially whether the price is fixed before, at the time, or after the produce is handed over, and whether the seller exercises any real influence in deciding the prices
 - (iv). Where a grower sells to his family shopkeeper, how is the account adjusted? Does the latter pay at once in cash or does he credit the grower's account? If the latter, how long after the delivery of the produce and at what rates?
 - (v). Where a grower is in debt and sells to his creditor, does he get as good a price as a grower who is not in debt? If not, what is the difference?
 - (vi). How much of the surplus was carried by the producer for sale in a central market? Is there any custom of selling in a central market through brokers who act as agents for the producers?
 - (vii). Describe the methods of purchase followed by purchasers in the central market—
 - (a). Who pays the *arhat*?
 - (b). Who tests the accuracy of the scales and measures used?
 - (c) Who pays the weighing charges?
 - (d) Give details of all other charges
 - (e). Does the cultivator get the rates prevailing in the central market for his products?
- 2. How many central markets are there in the neighbourhood? What is the distance of each from the village?
- 3. How far is the nearest railway station? Is it reached by a metalled road?
- 4. How many roads leading to the principal markets are available to the cultivator? Are they *kachcha* roads or metalled? What is their condition in the rainy season?
- 5. What are the means of conveyance available—
 - (a) *gaddas*; (b) donkeys; (c) camels; (d) others
- 6. Was any produce held up during the past five years in order to secure a better price? How far does the local Credit Society, if there is any, help towards this end?
- 7. State the dates when the land revenue is ordinarily collected in the village. Does the land revenue demand tend to make the cultivator sell his produce at once? State the land revenue demand in terms of weight of produce at the actual village price.
- 8. If a Co-operative Sale Society exists, describe the benefits actually derived from it.
- 9. What are the articles manufactured in the village? How are they sold?

XI.—PURCHASES AND INDUSTRY.

1. How do villagers purchase commodities required—
 - (a). for industrial and agricultural use ?
 - (b). for their own household consumption ?
2. What is the number of petty shopkeepers in the village and what commodities do they sell ?
3. What are the chief markets from which commodities are purchased and what is their distance from the village ?
4. Are goods purchased on credit or on cash ? If the former, how are payments made ? For how long do credit accounts run ? What disadvantages result from credit purchases ?
5. Are the goods adulterated or pure ? If the former, find out if possible the loss to the consumer due to this ?
6. Take measures and scales used by shopkeepers and test their accuracy. Note the discrepancy in each case.
7. If goods are purchased from a Co-operative Supply Society or Union, compare the prices with those of the local shops.
8. Do any village industries exist in the village ? Give details.
9. How is cotton ginned ? Is spinning done in the village ? If so, by whom ? Is any thread imported ? What is the number of looms ? Who does the weaving ? Is the cloth used for village consumption or is any exported ?
10. What is the number of oil-presses ? Who owns them ? Are they all in use ? Who works them ?
11. Is flour ground in the village ? If so, how ? Who owns and who works the mills ?
12. Is sugarcane pressed in the village ? How many presses are there ? Who owns and who works them ?

XII.—PRICE OF LAND

1. From the statement relating to sales obtain the percentage increase or decrease in the sale price of land—

(a). between 1895—99	}	and the last quadrennial period
(b) between 1905—09		
2. Compare the above percentages with the percentage variations in cash rents between the same periods.
3. See para. 376 of *Douie's "Settlement Manual."* Work out the general rise in prices by the second method explained therein, (a) since 1895—99, (b) since 1905—09, taking for the purpose the six most important crops in the village and using yields in accordance with the instructions given in Question 6 of the Chapter on *Yields*.
4. Compare the percentages in Question 1 with the percentages in Question 3.
5. If any land now under cash rents has been purchased during the past five years give the following figures separately for each transaction —
 - (a) area of land sold,
 - (b) total purchase price,
 - (c) average price per acre,
 - (d) cash rent per acre,
 - (e) per cent. return of (d) on (c),
 - (f) cash rent per acre after deducting actual expenses paid by the landlord,
 - (g) per cent. return of (f) on (c)
6. Take three holdings sold during the past five years *not* under cash rents. If reliable figures are available, work out the net per cent. return to the landlord on the purchase price.

XIII.—YIELDS.

1. Attach to your report a list of the yields assumed by the Settlement Officer at last Settlement for each class of soil and each crop in the circle in which the village is situated; and the estimates issued by the Director of Land Records.
2. Attach a copy of the Settlement Officer's inspection note of the village.
3. Enquire into the character of each harvest for the last five years for each of the chief crops. Classify it as very good, good, above average, average, below average, poor, bad, according to its character.
4. Give the zemindars' estimate of the yield in maunds per acre of each of the main crops for each of the above harvests on each class of soil.
Make your enquiries from various zemindars at various times and note the replies of each. Attach these to your report for purposes of comparison and give your opinion as to the reliability of the zemindar's estimate.

5. Take the Settlement Officer's assumed yields for the circle and adjust them for the village as follows.—
If Settlement Officer classed the village as *average* take the yields as they are; if he classed it as *very good, good* or *above average*, make suitable addition to the yields, if he classed it as *bad, poor* or *below average*, make suitable deductions
6. In using "yields" for general calculations use your "ascertained" yields if you regard them as reliable. Otherwise use the adjusted settlement yields described in paragraph 5 above.

XIV.—RENTS.

A —GENERAL.

1. Prepare the following statement —

Total cultivated area of village.	Area cultivated by owner.	Area cultivated by occupancy tenants	AREA CULTIVATED BY TENANTS-AT-WILL.			
			Paying at revenue rates.	Paying at batal rates	Paying cash rents	Paying other rents
1	2	3	4	5	6	7
	Acre per cent of total	Acre per cent of total.	Acre per cent of total	Acre per cent of total.	Acre per cent of total	Acre per cent of total.

2. Is there any difficulty in obtaining tenants ?
3. Are changes frequent among tenants ? Investigate conditions regarding the period of tenancy on thirty holdings.
4. Do (a) tenants, (b) landlords, prefer cash or share rents ?
Give reasons. Does their preference depend on kinds of crops or irrigation ?
5. Read Chapter XX, of *Douie's "Settlement Manual,"* and according to the principles there laid down, work out the cash rents paid on different classes of soil.
6. Have cash rents risen with the rise in the value of agricultural produce ? (Use material in *Statement 8* of the Village Note Book to answer this question)
7. Are *zabt* rents paid on particular crops ? If so, on what crops and at what rates ?
8. Is there any case of an owner taking fixed grain rents, irrespective of the state of the crop ? Cite all such rents
9. Do landlords give any advances to tenants in cash or grain ? If so, on what terms and how do they recover ? Does the owner lend seed to his tenants and if so, on what terms ?
10. Does the tenant receive from the owner any assistance or has the tenant any rights regarding assistance towards (a) material for houses, (b) grazing, (c) fuel, (d) site for house, (e) water for any purposes, (f) natural products of the soil ?
11. Is the exercise of the rights limited to the tenant's own requirements or has he any right of sale ?
12. What rights, if any, has a tenant regarding the use of trees on the land and the planting of new trees ?
13. Does the tenant make any gift of animal produce, such as milk, a goat at Bakr-Id, eggs, poultry, etc., to the owner ?
14. Does the owner make any such gift to the tenant, *e. g.*, a feast at the principal holy day or after harvest ?
15. Does either owner or tenant make any gift, such as a feast at harvest time, to the labourers ?
16. Can you find any instance of aid rendered by the owner to the tenant to combat pests, such as locusts, rats, etc. ?
17. Does the tenant render any similar aid to the owner ?
18. Does the tenant render any personal service to the owner—
(a) on social occasions such as marriage, (b) on shikar, (c) on the entertainment of guests, (d) or otherwise ?

19. Where grazing is included in the tenancy, does the owner provide any part of the stock ? If so, describe the custom or contract. Does the tenant pay rent in stock ? Does the owner share the produce, *e.g.*, milk, wool, young stock ?
20. Does the owner actually influence or direct the rotation or the selection of crops to be grown ? Have you found any instance of an owner insisting on a certain crop being grown or on a certain rotation ?
21. Can the owner graze his cattle on his tenant's fields after the crops are cut ?
22. Does the tenant get all the manure, or does the owner claim any share ?
23. Does the owner make the tenant grind his grain at the owner's mill (for districts such as Kangra, where owners keep mills) ?
24. Are there any conditions forbidding the cultivation of part of the lands under tenancy, such as the reservation of lands for grazing ?
25. Can you find any other conditions of tenancy not referred to above, which are observed generally without being anywhere recorded, *e.g.*, presumably the tenant admits the right of the owner to visit the fields and view the crops ?
26. Can you find any instance of an owner evicting a tenant for bad cultivation, faulty rotation, etc. ?

B.—BATAI RENTS.

1. What are the usual rates on different classes of soil in each harvest ?
2. How does the batai rate vary with the crop, such as wheat, sugar-cane, cotton, tobacco, fruit (mangoes) ?
3. How does the batai rate vary with the custom according as the landlord or tenant, pays the revenue, water rate, local rate, other dues or some of these ?
4. Are there any additional cesses paid to the landlord ? If so, what ? (*e.g.*, *haq zimindari* 2 seers per maund).
5. Is the crop divided on the tenant's land or at the owner's house ? Does the owner or tenant carry the owner's share to his granary ?
6. Describe in detail an actual partition of the crop witnessed by yourself. Note deductions for charity ; and to whom they go
7. What deductions are made from the common heap for menials ? Who threshes the owner's share ? What payment is made ? Who does the reaping, and how are the reapers paid ? When the tenants themselves do the reaping, do they receive the reapers' dues, if any ?
8. What services, if any, do these menials render (*a*) to the owner, (*b*) tenant, in consideration of the portions received from the common heap ?
9. Who provides the seed ?
10. Is it, or any portion of it, deducted from the common heap before sharing ?
11. If so, is the quantity deducted the actual quantity used, or is a little extra deducted over and above this ? Who takes the seed so deducted ?
12. What deductions not so far mentioned are made from the common heap ?
13. Are the fodder crops shared ? If so, give the rates for various fodder crops
14. Do landlords allow any concessions regarding fodder, *e.g.*, do they exclude from division a few kanals under fodder crops ? What concessions do they allow ? Does the owner allow the tenant a plot for vegetables or other produce for his own household use, taking no share for himself ? Is there any crop of which the owner takes no share (such as a catch crop, *e.g.*, *senj*, after cotton) ?
15. Where concessions for fodder are given, does the tenant make any gift of animal produce to the owner in return ?
16. Is the straw divided ? If so, of what crops and in what shares ?
17. Is there any condition prohibiting fodder or straw from being sold off the land ?
18. Does the landlord impose any conditions regarding the area or kind of fodder crops ? If so, what ?
19. What changes have occurred in batai rates during the past twenty years ?
20. Do mortgagees charge higher rates of batai than owners ?
21. Do all batai tenures run from year to year or is there any instance of a lease or contract for more than one year ?
22. Is there any instance of a share tenant sub-letting to another ? If so, does this indicate a right to sub-let ? If there is no instance, is this because the owners reserve this right when letting his land ?
23. Make a special enquiry of ten holdings under batai rents. Ascertain from the *Khasra Girdawari* what crops (area, irrigation, etc.) were grown on each during the past five years. Ascertain, if possible, what was (1) the tenant's share in maunds of each crop, (2) the landlord's share, in any or all of these five years. (If this information cannot be obtained, do not attempt to estimate it yourself.)
24. If accurate information can be obtained to Question 23, then work out the value at the prices current at the harvest in question of the (1) tenant's share, (2) landlord's share. If information for both harvests in a year is available, then work out the value of the total rent received *per cultivated acre*.—
Total value of rent, Rs. 350.
Total cultivated area of holding, 35 acres.

XV.—EXPENSES OF CULTIVATION.

1. All classes of cultivation—

(a). PARTICULAR HOLDINGS.

Take five particular holdings for investigation State for each of them —

- (i). Area cultivated, with kinds of soil (*nahri*, *chahi*, etc.), and uncultivated. Area sown in last five years with crops sown. Area returned as matured, *kharaba*, etc
- (ii). Cultivators, with details of working members of family, including every one who assists in any process of agriculture upon the holding
- (iii). Partners in cultivation, with details as above.
- (iv). Labourers paid in cash or kind throughout the year, with detail of payments, service rendered, hours and days of work
- (v). Cattle employed, with duties performed by them. Give details of days and hours worked throughout the year Is any use made of them when not required for any agricultural process upon the holdings? Give details.
- (vi). State if any cattle are hired, with details of hours, days and payments.
- (vii). What manures are used? How much is bought and how much home-produced? What was the value of the former? Give details as to utilisation. Does the landlord pay for any part of the manure?
- (viii). What fodder is used for the cattle employed (para (v) above)? How much is home-produced and how much bought? Give values, and details of disposal.
- (ix). What grain is fed to cattle? How much is bought and how much home-produced? Give values, and details of disposal.
- (x). What implements are used? Which are bought and which home-made? Give values, how long does each one last? Distinguish between those bought for cash and those supplied under custom for payment in kind.
- (xi). Give details of any implements hired, up to the final harvesting of the grain Give details of period of hire, amount of payment made in cash or kind.
- (xii). Give details of any other miscellaneous tools used
- (xiii). Give details of any other expenses of cultivation, salt for cattle, medicine for cattle, repairs, *rakkhas*, carriage of manure to the fields, if not already included.
- (xiv). Has the cultivator got a cart? If so, detail the uses to which it is put, expenses of initial cost and maintenance, earnings in cash or kind, with details of hours and days, distinguish between work on the cultivation of the holdings, and work independent of this Estimate value of work done in connection with cultivation of the holding.
- (xv). Seed —Give rate per acre for different crops on different classes of soil. Who provides it? What is its value at sowing time? Where is it obtained from?
- (xvi). Sowing —Are there any expenses of sowing not included in above?
- (xvii). Cultivation after sowing.—Are there any expenses not included above? Give details. Give details as to weeding; who does it?
- (xviii). Harvesting.—Are there any expenses not included in above? What are they?
- (xix). Deductions from common heap.—Distinguish those which relate to expenses of cultivation. Give values
- (xx). Threshing, winnowing —Are there any expenses not included above? What expenses are incurred in carriage of crop to shop or granary or to landlord's house?
- (xxi). Give any examples of extraordinary expenses of cultivation within recent years due to calamities of season, such as flood. Has seed had to be re-sown more than once? Is there any expenditure on hedging or on protection of the holding apart from particular crops, or on making boundaries?

(b). GENERAL.

- (i). Give figures for cattle, sheep, goats, etc., for each of the last five cattle censuses. How have increases or decreases in the cattle, etc., affected the supply of manure? If cattle, etc., have decreased, have cultivators made good the supply of manure in any other way?
- (ii). Do the owners of cattle sell the bones of dead animals? If so, to whom? If they are not sold, what use is made of them?
- (iii). Are there any grazing grounds in the village, apart from fallow lands? What is their area compared with the area of similar lands twenty years ago?

- (iv). Is there a Government forest or *rakh* near by in which the village cattle graze ?
If so, what facilities for grazing are allowed and on what fees ?
- (v). What are the sources of fuel in the village ?
Is cow-dung used for fuel ? If so, make an estimate of the percentage of the total cow-dung so used
- (vi). If there is a Government forest or *rakh* near the village, do the villagers obtain fuel therefrom ? If so, on what conditions and on what payments ?

2. Well Cultivation—

(a). PARTICULAR HOLDINGS.

- (i). When was the well sunk and how much did it cost ?
Did the owner have it sunk through a contractor or did he himself superintend the work ? Did he buy the bricks or have them made himself ?
- (ii). How did the owner find the capital ? Did he take a *taccavi* loan ? Did he borrow from a money-lender ? If so, how much did he borrow, what was the rate of interest and when did he pay off the loan ?
- (iii). What are the expenses of maintenance borne (1) by the owner, (2) by the tenant, apart from the work done by the *tarkhan*, *kumhar* or *lohar* in return for harvest dues ? To what did they actually amount during each of the past five years ?

(b). GENERAL.

- (iv). What is the present cost of sinking a well ? How does it compare with the cost of twenty, ten and five years ago ?
 - (v). Split up the cost into its component parts—price of bricks, payments to divers, to hired labourers, wood work, etc.
 - (vi). What is the cost of a *chakla chob* ? Of what wood is it made ? How long does it last ?
 - (vii). How many bullocks are used (a) for the well, (b) for ploughing, on an average-sized well holding ? Give specific examples
- ## 3. For Canal-Irrigated Holdings.
- Are the water-channels regularly cleared ? Does the owner or tenant clear them ?
What is the cost of clearance per acre irrigated—(check by particular examples) ?

XVI—CONSUMPTION.

1. Take the following classes of the village population for separate examination :—

- (a). Well-to-do land-owners
- (b). Small land-owners and well-to-do tenants.
- (c). Small tenants and agricultural labourers.
- (d). Village menials
- (e). Well-to-do non-agriculturists.
- (f). Other non-agriculturists not included in any of the above classes.

For each class give a description from personal observation so far as possible :—

- (a) of the number of meals each day at different seasons of the year;
- (b) the kind of food taken at each meal. *e. g.* *lassi*, pulses, vegetables, *chapattis*, etc.

2. Take up the following distribution according to ages and sexes :—

Males and Females separately :—

- (a). Below 5 years of age.
- (b). Between 5 and 10 years of age.
- (c). " 10 " 15 " "
- (d). " 15 " 25 " "
- (e). " 25 " 55 " "
- (f). Over 55 years of age.

Give the average monthly consumption of different kinds of food for each age period of each class of the population mentioned in Question 1. For cereals, pulses, *ghī*, millets and for other articles which can be so expressed, express the result in seers.

3. If possible, obtain actual figures of consumption of the chief articles of food, wheat, millets, pulses, etc., for ten families during a year and check your results in Question 2 against these known quantities

In the case of wheat, for instance, it should be possible to ascertain—

- (a). Amount in stock with a family before the new wheat is brought in.
- (b). The amount, if any, of this sold during the following year.
- (c). The amount of the *rabi* crop reserved for home consumption.
- (d). Sales and purchases during the year
- (e). Amount in stock at the end of the year,

Knowing the number, sex and ages of the family and dependents fed, the results of Question 2 can be checked. If information relating to particular families can be obtained easily the figures for as many families as possible should be stated.

4. What classes of the population eat meat? What kinds of meat do they eat? Do they consume meat regularly or only occasionally? Give a rough estimate of the meat consumption of the village for a year.
5. What is the milk production of the village (a) cows, (b) buffaloes, (c) goats? Is any milk exported? Is any milk imported? How is the milk consumed, as *ghi* or *lassi* or milk?
Is the milk supply adequate for the needs of the population?
6. Do the food grains produced in the village suffice for the consumption? Is there any export? If so, of what grains? What other articles of food are imported and exported?
7. How do the people vary their diet in times of scarcity? Give information for each class separately. At such times do any of the population leave the village for work outside? Where do they go and for what work?
8. Ascertain, if possible, what changes in diet have occurred during the past fifteen years?

Special Questionnaire for Mortgages

PART I—FOR EACH MORTGAGE.

- (1). Give caste or tribe of—
 - (a). mortgagor, noting whether he is—
 - (i). a member of a notified agricultural tribe in the district, or
 - (ii). not a member of such a tribe,
 - (b). mortgagee, noting whether he is—
 - (i). a member of a notified agricultural tribe, or
 - (ii). not a member of such a tribe, but the holder of a certificate as an agriculturist under the original Alienation of Land Act, (XIII of 1900), or
 - (iii). not a member of such a tribe and not the holder of such a certificate.
- (2). Is the mortgage embodied in a—
 - (a). registered deed, or
 - (b). unregistered deed, or
 - (c). only in the mutation register and *Jamabandi*?
- (3). Give the particulars of the mortgage—
 - (a). date,
 - (b). area mortgaged—
 - (i). uncultivated;
 - (ii). cultivated *Barani*;
 - (iii). cultivated *Nahri*;
 - (iv). cultivated *Ohari*,
 - (v). is a share in the *Shamlat* expressly included? :
 - (c). any additional security such as houses, trees, etc.;
 - (d). sum inserted in the mortgage as consideration, with any additional details given therein;
 - (e). sum due now as calculated from the mortgage deed and any endorsements thereon.
- (4). Classify the mortgage as to whether it is—
 - (i). without possession
 - (a). in the form of clause (b) section 6, Land Alienation Act;
 - (b). in some other form; give points where it differs from above;
 - (ii). with possession—
 - (a). in form of clause (a) of section 6, Alienation of Land Act,
 - (b). in form of clause (c) of section 6, Alienation of Land Act,
 - (c). without any condition for automatic redemption, with *bar-bilwafa* clause,
 - (d). as above without *bar-bilwafa* clause;
 - (e). any other form.
- (5). In (c), (d) and (e) above, note what is the condition as to interest. Is the rent to be taken as interest on the whole amount of the consideration or on only a part?
- (6). In (c), (d) and (e) above, note the condition on which the mortgage may be redeemed.
- (7). Trace the history of the mortgage as far back as you can.
Give particulars of—
 - (i). previous deeds,
 - (ii). consideration,
 - (iii). area,
 - (iv). amounts of principal and interest,
 - (v). any payments towards redemption or reduction of the debt,
 - (vi). purpose given for further borrowing.

(8). What changes have taken place in the area mortgaged during the period of the mortgage, such as increase of cultivated area, increase of *chahi* or *nahi*?

(9). During the currency of the mortgage, note any change in the land revenue assessed on the area mortgaged.

(10). From the revenue records of the village estimate the value of the land mortgaged at the time of each quadrennial *Jamabandi*.

(11). (a). In mortgages with possession, note who has cultivated the land during the currency of the mortgage (as entered in successive *Jamabandis*)

(a). Note the rent as entered in successive *Jamabandis*

(c). Attempt an estimate of the value of the rent paid in kind, based upon the Director of Land Records' outturns and Tahsil prices

(12). If original mortgagee is alive and trustworthy information is available, ascertain from what source the mortgagee obtained the consideration money, *e.g.*, whether he borrowed it from a money-lender, or saved it from his pay in civil or military employ, or from some other source.

[NOTE.—Where the *bai-bilwafa* clause has been struck out by the Deputy Commissioner classify as (c)]

(13). Is the mortgagee the real party advancing the money, or is he the agent of another party (*bendām*); give such particulars as you may be able to obtain in case you believe the transaction is *bendām*. Note specially if there is any attempt at evasion of the Alienation of Land Act

(14). Is there any evidence of a prior mortgage having been redeemed under the conditions of section 6, Alienation of Land Act, and of the same land having been re-mortgaged to the same mortgagee?

If so, give such information as may be available that throws light on the effects of the Alienation of Land Act and attempts to evade it

(15). From the information you have gathered, note whether the mortgage was for the benefit of the mortgagor, *e.g.*, to enable him to improve his land or increase his income or was merely an abuse of credit, enabling him to meet unproductive expenditure or to secure debts incurred on unproductive expenditure. (Classify as an abuse of credit, every contract that was not directed at the economic improvement of the mortgagor.)

PART II — GENERAL QUESTIONS FOR THE ASSESSMENT CIRCLE UNDER INVESTIGATION.

1. Classify existing mortgages into—

(a). executed prior to 8th June 1901,

(b). executed subsequent to this date;

Sub-divide these into (a. i) and (b. i) between members of what are now agricultural tribes:

(a. ii) and (b. ii) between members of what are now agricultural tribes and others; note if any statutory "agriculturists" are among the "others,"

(a. iii) and (b. iii) between parties, neither of whom are members of what are now agricultural tribes

2. Note in the above classification the number of mortgages (a) secured by a registered deed, (b) secured by an unregistered deed, (c) not embodied in a deed.
3. Note in the above classification the total area mortgaged, uncultivated, cultivated *barani*, *chahi* and *nahi*; note the number which include a share in the *shamilat*.
4. Note in the above classification the total consideration money entered in the deed or mutation register, and the total which you have now found to be due.
5. Note in the above classification the distribution of mortgages by classes (Part I, Q. 4).
6. Summarise the information collected as to the *bai-bilwafa* clause (Part I, Q. 4), with reference to the classification in paragraph 1 above.
7. Summarise the information collected as to the conditions relating to interest (Part I, Q. 5) with reference to the classification in paragraph 1 above.
8. Summarise the information collected as to redemption (Part I, Q. 6).
9. Summarise the information obtained as to the history of mortgages (Part I, Q. 7).
10. Summarise the information obtained as to changes in the area mortgaged (Part I, Q. 8), in the land revenue assessed (Q. 9), and in the value (Q. 10),

11. Summarise the information as to cultivation and rent, giving such reference to the classification as may prove of value.
12. Is the mortgage money derived from non-agriculturist money-lenders, from agriculturist money lenders or from savings from salaries or other earnings? (Part I, Q. 12).
13. Discuss the information gathered as to the *benami* transactions and evasions of the Alienation of Land Act (Part I, Q. 13, 14).
14. Discuss the economic effects on the land-owners of the power to mortgage their land (Part I, Q. 15), encouragement of extravagance, encouragement of land improvement, etc.
15. Discuss the information you have secured bearing on the rise of mortgagees from amongst agricultural tribes, from the points of view of (i) number of such mortgagees at different dates, (ii) number of mortgages at different dates, (iii) consideration money advanced. Is there any evidence of a decline in mortgages; (iv) in favour of non-agricultural mortgagees, (v) by agricultural mortgagors?
16. Note any general conclusions which the evidence leads you to make on the subject of mortgages in the area under investigation

Special Questionnaire on Goats.

1. Give the number of goats in the village, classify by sex, and add details as to variety, if there is any local variety recognised.
2. Give details of the owners, with caste, tribe, main occupation, religion, and note which of them are—(a) owners of land in the village, (b) co-sharers in the *shamilat*, (c) tenants without proprietary right, (d) menials who do not cultivate as tenants, (e) other non cultivators.
3. Who looks after the goats? Note the common custom in the village for night and day herding, give the age, sex and tribe or caste of the goatherd.
4. Where the goatherd is not a relative of the owner, give particulars of the remuneration he receives.
5. What are the goats fed on? Note how far they are fed on grain or other food other than leaves, on leaves on owner's private land, on leaves from *shamilat*, or from road side trees, government lands, etc.
6. Are the goats confined or let loose to browse at will? What check is exercised over browsing?
7. Do goats live on food which other domestic animals do not touch, or do they compete with other domestic animals for food? Do they eat grass in competition with sheep or cattle?
8. How far is the cost of feeding met by payment in cash, manure, service, milk, etc., and how far is it free?
9. Is any grazing fee levied by the proprietors of the village? If so, give particulars. Is any grazing fee paid to any one else, such as Revenue Department, the Forest Department, Railway, Canal Department, District Board?
10. Note any other expense involved in the keeping of goats not included above.
11. What is done with the manure? Are goats folded on the land for manurial purposes? If so, what is the custom governing this practice? Is goat manure stacked separate from cow manure?
12. What is the local opinion as to the value of manure? Is it regarded as more powerful than cow manure?
13. Is any control exercised over covering so as to secure kidding at any special season? Give details.
14. How many kids does a female goat produce in its lifetime? Does she kid once a year or twice? Does she produce more than one kid at a time?
15. When are female goats slaughtered? At what age or after which lactation?
16. What is a normal yield of milk per lactation? Can you get accurate details as to yield per day at the beginning, middle and end of lactation? What is the period of lactation?
17. What is done with the milk? Where is it sold and for what price? What is a normal value to put on the milk of one lactation? How often a day is the goat milked?
18. Who are the chief consumers of goats' milk? Does it replace or supplement cow's milk? Is it drunk by those who cannot afford cow's milk?

19. How much milk is left for the kid ? When is the kid removed from its mother ?
20. What differences are there in the uses to which the milk of goats and cows is put, *e.g., ghee, lassi, etc.* ?
21. At what age are male and female goats slaughtered for meat ? What is a normal amount of meat per animal ? At what prices is it sold ?
22. Who are the chief consumers of goats' meat ?
23. Is there any special occasion on which goats are slaughtered by Hindus and Mahommedans ? If so, how many animals are slaughtered in the village on such occasions ?
24. Is the village or tract under investigation self-supporting so far as goats are concerned or are goats imported or sold ? Give details as to number, price, etc.
25. Give details as to local uses to which goat's hair, bones, horns, hides are put.
26. Give details as to trade in the above, with prices obtained for the produce.
27. Is there any other income from goat-keeping not included above ? If so, give details.
28. If the profits from goat-keeping were taken into consideration at Settlement, give such remarks as the Settlement Officer may have made in the Village Note Books, Assessment Reports, etc.
29. Give, if available, figures for the number of goats in the village at different periods.
30. Give details of any nomad goat-keepers who visit the village.
31. Summarise any complaints you may hear of damage done by goats from (a) co-sharers in the village, (b) District Board Arboricultural Staff, (c) Forest Staff, (d) others.
32. Is there any evidence that goats have denuded any area of trees ?
33. Is there any evidence that goats have served to reduce the amount of wood fuel in the area ?
34. Is there any evidence that goat-herds damage trees by using axes or other implements, and by cutting branches instead of lopping leaves ? Describe the implements used.
35. Can you test such evidence by an actual comparison between two areas, one in which there are a number of goats and one in which there are none ?
36. Where goats are not kept, can you discover any reason ?
37. Is any attempt made to improve the breed of goats, by selecting rams, or by any other method ?

APPENDIX C.

GLOSSARY OF TERMS.

ABADI	.. Village site.
✓ACHCHAR	.. Pickle.
ADHIARA	.. A system on which cattle are given out during their dry periods on certain conditions—see footnote on page 275.
AGGARWAL	.. A sub-caste of <i>Banias</i> , a trading and money-lending class.
AGRICULTURAL TRIBES.	.. Tribes which have been notified as agricultural in accordance with the Punjab Alienation of Land Act, (XIII of 1900).
AJWAYAN	.. Seeds of dill plant; used as a remedy for flatulence.
AK	.. A shrub (probably <i>calotropis procera</i>).
ALSI	.. Linseed (<i>Linum usitatissimum</i>).
ANDAN	.. Intestines.
ANNA	.. One-sixteenth of a rupee.
ANNUAL RECORDS	.. See Jamabandi.
ARAIN	.. A Mohammedan agricultural tribe, known for its industrious habits; often found as market gardeners near cities.
ARHAT	.. Commission; brokerage.
ARHTIAS	.. Commission agents, brokers.
ARORA	.. A Hindu trading caste.
ARQS	.. Essences; distilled liquids.
✓ASOJ	.. An Indian month (the middle of September to the middle of October).
ATTAR	.. Apothecary.
✓AWAT	.. Invitation to friends and neighbours to help in agricultural operations; they are not paid but are liberally entertained.
BADHAI	.. Customary dues given to menials on the birth of a child.
✓BAFINDA	.. Weaver.
BAHI	.. Account book.
BAISAKH	.. An Indian month (the middle of April to the middle of May).
BAJRA	.. Bulrush or spiked millet (<i>Pennisetum typhoideum</i>).
BAKE 'ID	.. A Mohammedan festival.
✓BANGRI	.. Hoe.
BANIAS	.. The chief Hindu trading and shopkeeping caste.
BANJAR JADID	.. Land which has remained fallow for four successive harvests (new fallow).

BANJAR KADIM	.. Land which has remained fallow for at least eight successive harvests (old fallow).
BAR	.. The tract between Chenab and Ravi rivers of the Punjab ; once desolate but now prosperous owing to introduction of canals.
BARANI	.. Dependent on rainfall.
✓BARIAN	. A preparation of ground pulse and spices.
BATAI	.. A system of farming where rent is a certain proportion of the produce ; <i>c. f.</i> metayer system.
BAZAZI	.. Piece-goods.
BAZIGAR	.. Juggler and acrobat.
BEHLI	.. Bullock carriage for riding.
BELNA	.. Press for ginning cotton.
✓BENAMI	.. In mortgages refers to cases where the name of one party, usually the mortgagee, is suppressed and replaced by a puppet
✓BER	.. Plum tree (<i>zizyphus jujuba</i>).
✓BERRA	.. Wheat and gram grown in mixture.
✓BET	.. Riverain.
BHADON	.. An Indian month (the middle of August to the middle of September).
BHAICHARA	.. Literally 'custom of the brotherhood.' In the Punjab it implies a system of tenure in which possession has become a measure of right.
BHAIJI	.. A religious leader of the Sikhs.
BHAJI	.. Share in the food.
BHANGI	.. Sweeper.
BHARAI	.. Muslim drum-beater caste.
BHATTA	.. An allowance over and above fixed pay.
✓BHONI	.. Pulley used on wells.
BHUSA	.. Straw crushed and broken into short lengths by bullocks treading on it during threshing.
✓BIDDS	.. Pulley stands.
✓BIGHA	.. A measure of area . in Jullundur District, equals four kanals or 0.38 acre.
✓BIHAR	.. Interest.
BRAHMAN	.. The highest or priestly caste among the Hindus.
CANAL COLONY	.. The name given to a large area brought under cultivation as a result of a canal project.
CHAH	.. Irrigated from wells.
✓CHAH MASTAR	.. Land which is irrigated from wells belonging to other people

- ✓ CHAHLAS .. Tanks near the well from which water passes on to different channels.
- ✓ CHAKLA CHOB .. A wooden cylinder which forms the foundation of the brick lining of the well.
- CHAKOTA RENT .. Lump grain rents or rents consisting of a fixed amount of grain in the spring (rabī), and a fixed amount of money in autumn (kharif) harvest.
- CHAMAR .. Leatherworker caste.
- CHHAH WELA .. Time of early morning meal of the cultivators.
- ✓ CHHAMB .. Ploughing a sown plot before shoots appear, a process said to favour growth.
- CHAPATTI .. The Indian loaf; a flat round wafer of unleavened flour.
- CHARI .. Jowar (*q. v.*); great millet (*Andropogan sorghum*) grown for fodder
- ✓ CHARSA .. Leathern bucket or bag for lifting water from wells
- CHAUKIDAR .. Watchman.
- CHET .. An Indian month (the middle of March to the middle of April.)
- CHHATANK .. An Indian weight equal to 2·057 ozs., or 1/16th of a seer.
- ✓ CHHATTA .. Sowing broadcast.
- ✓ CHHIKLI .. Muzzle for bullocks.
- CHHIMBA .. Washerman caste; also found as tailors and dyers.
- ✓ CHIL .. Pine (*Pinus longifolia*).
- ✓ CHOPATTA .. Ledger.
- CIRCLE NOTE BOOK .. A book kept in the tahsil office in which agricultural results of the tahsil are entered.
- ✓ DAKKA .. Same as Kundal.
- DAL .. Split pulses.
- DALAL .. An agent or broker.
- DALIA .. Roughly ground maize boiled in sweetened water with sugar added.
- DARANTI .. A kind of sickle; reaping hook.
- ✓ DARAR .. Roughly-ground flour for cattle.
- DAROGHA .. Overseer.
- DARZI .. Tailor.
- ✓ DAT .. Sickle with or without teeth.
- DEODAR .. Cedar (*Cedrus deodara*).
- DEPUTY COMMISSIONER. The administrative head of a District.
- ✓ DHAHA .. Upland as distinguished from the riverain.
- ✓ DHANDOL .. Sweet wash of the pan after gur has been manufactured

✓DHANGIS	.. Bamboos with a curved blade at one end for lopping off leaves from trees.
DHARAM	. Deductions for charity.
DHARAMSHALA	.. A rest house for travellers and pilgrims.
✓DHARI	A measure of weight equal to 4 seers.
DHOBI	. Washerman.
✓DHURRA	.. Iron axle on which pulley works.
✓DOBIDDI	.. Wells having two bidds or wheels on which two leather bags can be worked at the same time.
DOOHIDIE	.. $1\frac{1}{2}$ times in 6 months : a rate of interest equal to 100 per cent. per annum, observed in grain loans only.
✓DOPEHRA	.. Midday meal time of the cultivator. .
✓DURRIES	.. Floor coverings, cotton carpets.
FAQIR	.. Beggar.
✓GADALA	.. Spade.
✓GADDA	.. Bullock-cart
✓GADDAWALA	.. Driver of bullock-cart.
✓GALGHOTOO	.. Rinderpest.
✓GAND	.. See Chakla Chob.
GANDASA	.. Chopper for cutting fodder.
GHAIR MUMKIN	.. Not culturable.
GHARA	.. Earthenware pitcher.
GHI	.. Clarified butter, used in India instead of lard.
✓GHIA	. Gourd ; vegetable marrow (<i>Lagenaria vulgaris</i>).
✓GHUMAON	.. A measure of area . in Jullunder District equals 0.752 acres.
✓GHUMAR	.. Potter.
GHUNDIS	.. Sweepings of a threshing floor containing straw and grain.
GOONS	.. Bags made of goat hair.
GOWSHALA	.. Sanctuary for cows.
GROONA	.. A pest; cane-borer.
GUJAR	.. An agricultural and cattle-rearing tribe.
GUR	.. Raw cane sugar in lumps.
HAJJAM	.. Mohammedan barber.
HAL	.. Wooden plough.
HALALI	.. Liver.
HALWA	.. A popular confection made of flour, ghi and sugar,
HAR	.. An Indian month (the middle of June to the middle of July).
HATHIAS	.. A large knife with the blade curved at top.
HATH UDHAR	.. Casual loans without interest.
HUKKA	.. Hubble-bubble : the Indian smoking pipe.

- ID** .. Mohammedan festival.
ID-UL-FITR .. The Mohammedan festival at the end of the Ramzan (fast).
INDIAN PENAL CODE, Enticing or taking away or detaining with criminal intent
SECTION 498. a married woman.
IZZAT .. Prestige · social status.

JAMABANDI .. Register of holdings of owners and tenants showing land held by each and amounts payable as rent, land revenue and cesses. This register is the record prepared with great care at the time of each Settlement. The entries in it are presumed to be correct for legal purposes. An abridged revised edition containing full accounts of all changes was formerly prepared every year, and a complete revised edition every fourth year. These subsequent editions could embody any changes of permanent or quasi-permanent rights from the Settlement Record except those which were sanctioned by a Revenue Officer. These subsequent editions are also called Jamabandis in the vernacular, but are known as Annual Records in English. The term 'annual records' persists, although only the quadrennial detailed edition of the Settlement Record is now prepared.

JAMMA .. Land Revenue.
JAT .. One of the principal landowning agricultural tribes in the Punjab.
JETH .. An Indian month (the middle of May to the middle of June).
JHATKA .. Killing by one blow ; the form of animal slaughter sanctioned by the Sikh religion.
JHIWAR .. Hindu water-bearer caste.
JHOKA .. Furnace feeder at the time of making cane sugar.
JINSWAR STATEMENT A Statement showing the total produce of crops.
JOHARS .. Ponds.
JOOOTH .. Leavings after meals.
JOWAR .. A large millet, a very common food grain (*Andropogon sorghum* or *Sorghum vulgare*).
JULAHA .. Weaver.

KACHCHA OR KHAM In case of weights applied to local (village) as distinguished from standard ones, and in Tehong, $2\frac{1}{2}$ times in weight than the latter ; for wells the term is used to denote those which are unlined by bricks, and for houses those made of mud only.

KACHCHI LASSI	.. A drink of milk with water and sugar added ; considered to have a cooling and refreshing effect.
KADIM	.. Old.
KAH	. Produce given as charity to menials on the harvest field for services rendered.
KAHI	.. Spade.
KALAVA	.. Literally as much as can be held in both hands.
KALLAR	.. Alkaline incrustation on soil ; also earth of old ruins.
KALRATHU	.. Heavy alkaline soil.
KAMAD	. Sugarcane (<i>Saccharum officinarum</i>).
KAMIN	. Menial ; village servant.
KANAL	.. A measure of area : in Jullundur District, equals 0.094 acre.
KAND	.. Machine made sugar.
KARAH	.. Earth board : levelling beam.
KAREWA	.. Remarriage of widows.
KASHMIRI	.. Labourers coming from Kashmir.
KASSAB	.. Mohammedan butcher caste.
KATAK	.. An Indian month (the middle of October to the middle of November).
KERA	.. Sowing in the furrow behind the plough.
KHADDAR	.. Rough home-woven cloth.
KHAKROB	.. Sweeper.
KHAM	.. See Kachcha.
KHANA KASHT	.. Column in Record of rights showing the cultivator of each field in a holding
KHANA MALKIAT	.. Column in Record of rights showing the owner of each field in a holding.
KHANCHI	.. Locally made white sugar.
KHARABA	.. Portion of crop which has failed to come to maturity.
KHARIF	.. Autumn harvest or monsoon or summer crops.
KHASRA GIRDAWARI	Harvest inspection register.
KHATEEK	.. Tanner and dyer class
KHATRI	One of the principal Hindu trading caste.
KHATTA	.. A preparation from sour curds or cheese.
KHEER	. Rice boiled in milk or cane juice.
KHOJAS	.. Muslim trading caste.
KHUDKASHT	.. Cultivated by owner of the land.
KHUNDROO	.. Hocks and hoofs.
KHURPA	.. Hand hoe.
KHUTLI	.. See Gadala.
KIKAR	.. A tree (<i>Acacia arabica</i>).
KULHARI	.. Small Axe.
KUNDAL	.. The handle of a leathern bucket.
LABANA	.. A peddling caste.

LADDU	.. A sweetmeat in the form of little balls.
LAL KITAB	.. Village Note Book : a book in which the visiting officer notes the state of the village.
LAMBARDAR	.. Village headman : he collects the revenue and cesses and pays them into the treasury.
LATHA	.. Long cloth.
LASSI	.. Butter-milk
LAUN	.. Rope used for pulling up the charsa.
LAVA	.. Thresher or harvester , reaper.
LOHAR	.. Blacksmith.
LOHRI	.. A Hindu mid-winter festival.
LUNGI	.. Cotton cloth with silk borders.
MAGH	.. An Indian month (the middle of January to the middle of February)
MAGHAR	.. An Indian month (the middle of November to the middle of December).
MAHAJAN	.. A Hindu trader and money-lender, usually of <i>Bania</i> , <i>Khatri</i> or Brahman caste.
MAIL	.. Impurities : scum.
MAIZE	.. Vernacular makki (<i>Zea mays</i>).
MAJAWAR	.. Caretaker of the Mohammedan cemetery.
MALLA	.. A shrub (<i>Zizyphus nummularia</i>),
MALIK	.. Owner.
MARLA	.. A measure of area : one-twentieth part of a kanal.
MASALLA	.. Cattle physic.
MASH	.. A kind of pulse (<i>Lens esculenta</i>).
MASHAK	.. Leather-bag for carrying water.
MASSAR OR MASUR	.. A kind of pulse (<i>Phaseolus radiatus</i>).
MAUND	.. An Indian weight equal to 82 ² / ₇ lbs. or 40 seers.
MEGAS	.. See Trash.
METHA	.. Fenugreek (<i>Trigonella fenum graecum</i>).
MILAN RAQBA	.. Annual area statement.
MIRASI	.. A minstrel caste now rapidly dying out : they used to wander over the country-side singing its legends and keeping alive the memory of its heroes.
MOCHI	.. Mohammedan leather-worker caste.
MOHARAS	.. Heaps of maize harvests.
MOHONDHI	.. Second growth of the crop sown the previous year.
MOTH	.. A small pulse (<i>Phaseolus aconitifolius</i>).
MUAFI	.. Free grant of land.
MUNG	.. A kind of pulse (<i>Phaseolus mungo</i>).
MUNJI	.. Rice.

NABALIG	.. Minor.
NAHRI	. Irrigated from canals.
NIGAHA	. A holy place of pilgrimage
NIAIN	. The land around the village which receives the night soil.
NIKAH SANI	Literally second marriage.
ODS	. A wandering tribe.
PACCA	.. Applied to weights and measures recognised by Government as distinguished from those used in the village; for wells and houses used to denote those which have been built with bricks
PAISA RUPIA	.. Literally one pice ($\frac{1}{4}$ anna) per rupee per month, a rate of interest equivalent to $18\frac{3}{4}$ per cent. per annum
PAKKA	.. Same as pacca.
PAKKA HAL	.. 25 to 50 acres of cultivated land, i.e., as much land as can be cultivated by one yoke of cattle.
PANCHOTRA	. The headman's commission for collecting Government dues.
PANDA	.. Hindu Priest.
PANSARI	. Grocer.
PAO	. A measure of weight equals 8 ozs. or $\frac{1}{4}$ seer.
PAPAR	A round wafer prepared from flour and spices.
PAROHIT	.. A family priest of Hindus.
PAROSA	.. Literally a dish of food sent to a friend or put before a guest.
PATHI	.. Handle of the plough.
PATTI	.. A sub-division of an estate.
PATWARI	.. The village accountant. Formerly a village official, now practically a Government servant who has to maintain the records and statistics of the village; also used for a subordinate canal official.
PENJAS	.. Cotton teasers.
PETI	.. Paunch.
PHAGAN	.. An Indian month (the middle of February to the middle of March).
PHALA	.. Ploughshare.
PHALLA	.. Wooden framework used at the time of threshing of crops.
PHULAI	.. A tree (<i>Acacia modesta</i>).
PIAZI	.. A rabi weed.
PICE	.. Quarter of an anna.
PTE	.. One-twelfth of an anna.
PINJALI	.. Wooden yoke.
PINNI	.. A sweetmeat made of rice, flour and sugar.
PIR	.. A holy man; a saint.
PLAH	.. Dhak; Forest flame, a tree (<i>Butea frondosa</i>).

POH	.. An Indian month (the middle of December to the middle of January).
POORBI SOOT	.. Machine spun yarn.
PORE	.. Tube attached to the plough through which seeds are dropped into the furrow.
PULAS	.. Sheaves.
PUNJAB ALIENATION OF LAND ACT.	An Act passed in 1900 restricting the sale of land by persons of agricultural tribes.
SECTION 6 (a)	.. The mortgagor delivers possession of the land to the mortgagee, who, subject to agreement and to certain conditions, can retain possession for a period not exceeding 20 years, after which the land is re-delivered to the mortgagee, free of all charge.
QAZI	.. Originally a Mohammedan judge or magistrate, now usually one who interprets Islamic law and performs the marriage ceremony between Mohammedans. He has no power conferred by law.
RABI	.. Spring harvest or winter crops
RAJPUTS	.. Inhabitants of Rajputana, or one whose ancestors came from Rajputana.
RAKH	.. A forest reserve.
RAKHA	.. One who guards the ripening corn.
RAMBA	.. Trowel.
RAT WELA	.. Evening meal time.
RIENS	.. See Arains.
RIWAJ	.. Custom.
SAG	.. Pot-herbs.
SAILAB	.. Subject to flooding.
SAKHISARAWAR	.. A saint who lived in twelfth or thirteenth century, well-known for his generosity; he still has a following.
SALAGAL	.. Used collectively for the lungs, liver, spleen and heart of the slaughtered animal.
San	.. Hemp (<i>Crotalaria juncea</i>).
SANGI	.. Wooden pitch-fork: (a two-pronged fork).
SARDAIE	.. An easily prepared syrup considered to have a refreshing and cooling effect.
SARSHAF	.. Black or True mustard (<i>Brassica nigra</i>).
SARSON	.. Rape (<i>Brassica campestris</i> , var. <i>glauca</i>).
SARWAN	.. A camel driver.
SATOO	.. A preparation from barley; makes a cooling drink.
SAWAN	.. An Indian month (the middle of July to the middle of August).

SAWIAN	.. Vermicelli.
SAYED	.. Muslim religious caste originally those who were descendants of the Prophet Muhamed.
SEPI	.. Definite work done for a cultivator by a menial on customary payment in kind.
SEER	.. An Indian weight approximately equal to 2 lbs.
SHAGIRDI	.. Deductions made by buyer in the market as remuneration for the assistance of his apprentices
SHAKKAR	.. Raw yellow sugar reduced to a coarse powder.
SHALGAM	.. Carrots.
SHAMILAT	.. Common land of the village.
SHANGRAND	.. First day of an Indian month.
SHASHMAHI	.. Six monthly.
SHEERA	.. Syrup ; a bye-product of white sugar.
SHIRINI	.. A kind of sweets.
SHISHAM	.. A tree valuable for its timber (<i>Dalbergia sisoo</i>).
SIANA	.. A wise man.
SIE	.. Earnest money.
SIKH	.. A member of the martial religious sect of the Punjab.
SIRI	.. Head.
SOHAGA	.. Clod crusher.
SONF	.. Fennel (<i>Feniculum vulgare</i>).
SONJI	.. Land given as a gift for religious purposes.
SONJIDAR	.. Holder of a sonji.
SUFEDPOSEH	.. A minor village official.
SUNAR	.. Goldsmith.
SUNDH	.. Dried ginger.
SWAYIE	.. $1\frac{1}{2}$ times in six months ; a rate of interest, equal to 50 per cent. per annum , observed in grain loans only.
TACCAVI	.. Loans made by Government for seeds, cattle or agricultural improvements.
TAHSIL	.. A sub-division of a district with a separate administrative staff. In the Punjab there are usually from three to five tahsils in a district.
TAHSILDAR	.. An official in executive charge of a tahsil.
TAKIA	.. Literally the abode of a faqir ; a gathering and resting place
TAND	.. Guts.
TANGAR	.. Rope net, for carrying approximatly one maund of straw.
TANGLI	.. Five-pronged fork.
TARAMIRA	.. A kind of oil-seed ; rocket (<i>Eruca sativa</i>).
TARKHAN	.. Carpenter.

TEH	.. An older site.
TELI	.. Oil-presser.
THAPRI	.. A wooden implement to break clods
TIL	.. An oil-seed ; <i>Sesamum</i> (<i>Sesamum indicum</i>).
TINDA	.. A vegetable (<i>Citrullus vulgaris</i> , var <i>fistulosus</i> .
TOONA	.. Superstitious observances performed in order to counteract magic spells.
TORIA	.. Rape, an oil seed (<i>Brassica campestris</i> , var. <i>toria</i>)
TRASH	.. Sugarcane after the juice has been extracted.
TUKKA	.. Pod.

VILLAGE NOTE BOOK A book in which the visiting officer notes the state of the village.

ZABTI RENTS	.. Cash rents for crops which cannot be divided conveniently.
ZAIL	.. A sub-division of a tahsil.
ZAILDAR	.. A man of influence who has charge of a zail.
ZEMINDAR	.. Landowner ; farmer.

APPENDIX D.

LIST OF TABLES AND STATEMENTS.

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